

1935-2005



ВХОД

MOSCOW
METRO

СХЕМА ЛИНИЙ СКОРОСТНОГО ТРАНСПОРТА МОСКВЫ

RAPID TRANSIT SYSTEMS OF MOSCOW



Publishing house

1861

ВОКРУГ СВЕТА

2005

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Photo on the cover: Ground pavilion of Station Oktyabrskaya of the Circle Line (below).Foto – Mark Bonneville

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GENERAL PART



State unitary enterprise «V.I. Lenin Moscow Metropolitan» is an outstreet rapid transit system for mass conveyance of passengers. The metro is opened from 5.30 a.m. to 1.30 a.m. of the next day. Rush hours – 7.30-9.30 and 17.30-19.30. The interval between trains in rush hours is not more than 1.5 minutes. It is possible to consider that the Metro operates as traditional within the Circle Line and rapid outside it. However there is no special rapid line in Moscow.

The Moscow Metro has 275.6 km (in double-track calculation). It means that each of 275 km really includes 2 km of tracks – one there and one back. Two hundred fifty seven km are in tunnels of 3-5 to 65 m deep. Only 18 km are on the surface, in specially fenced corridors and bridges. There are four metro-bridges in Moscow (3 across the Moskva River and 1 across the Yauza). Every day 3250 passenger carriages are in operation. One 8-carriage train carries 850 passengers. On a normal weekday (20 hours of operation) the metro carries near 9 million passengers. It is 3 200 000 000 passengers a year, or 115 152 800 000 passengers since the opening of the Moscow Metro.

The Moscow Metro pertains to a diameter-circle type with a tendency for complication by a star-like or diagonal-lattice type. In total, the Moscow Metro has 12 lines, including 6 diametric, 3 radial, 1 circle, 1 chord and 1 light.

Stations in the central part of the city are deep – tunnels are constructed under existing sewer pipes, electric lines, and telephone cables by driving with caisson of shield methods. The deeper, the better for tunnelling – rocks are more solid with less water. Hence tunnels can be constructed through the shortest route, and stations are made on underground heights – «tunnel peaks». From a peak a train can start idling.

Shallow stations are built where the metro runs along streets, boulevards, or highways. The depth depends on the thickness of roadway covering and ground layer, which provides heat insulation of a tunnel. Such method is cheaper but builders have to replace urban communications and strengthen foundations. Shallow metro is usually constructed with cut-and-cover tunnelling.

Tunnels of the metro have round, oval, binocular, rectangular, or arched cross-sections. A cross-section (height, width, diameter) depends on the number of tracks. There are usually one or two tracks in Moscow; the gauge is 1 m 52 cm. The size also depends on the width of carriages – 2.7 m (metro) and 2.1 m (light metro). The typical track tunnel of the Moscow Metro is one-track, round (5.1 m in diameter) or rectangular (4.16x4.4 m). It is an inner size. The total size is near 1 m wider – thickness of tunnel lining and outer waterproofing shell. Numerous communications are laid in tunnels, such as power cables, communication lines, interlock lines, signal lines, control lines, fire-fighting pipelines, pumping tubes, ventilation boxes and heating lines.

Tracks are laid on a concrete base (trough), not ground. Sleepers, continuous or cut, are placed in special track concrete, not a ballast layer of crushed stones. A gutter is located along the whole track. Jointless welding tracks with wooden sleepers and rubber interlayer under rails are used in the metro to reduce noise.

The third rail is a conductor of direct current. It carries current (825 volts), which feeds an electric motor of a carriage through a current collector. The third rail runs along one wall at a low height. It is isolated by a hard case along the whole length. The case has a slit on the bottom side in which a current collector slides. If a person falls down on rails, he or she would suffer from electric power only if making special efforts. Back current and autointerlock current run by track rails, so they are carefully isolated from all other elements of a tunnel.

A station of the metro is a complex of structures and devices on stops designed for boarding, landing, and transit of passengers and maintenance of train operations. An underground station is the complicated and expensive structure of the metro. There are 170 stations in Moscow (165 of traditional and 5 of light metro). By purpose they are terminal, zonal, intermediate, transitional. Terminal stations have sidings, dead-end sidings, and exits to depots. Zonal stations have facilities to bring up and get off trains when a passenger flow increases or decreases. Intermediate stations have no transit to other lines, while a passenger at a transitional station can change the line. There are 56 transitional stations in Moscow and 7 transitional junctions which include 3 and more stations (3 lines – 6, 4 lines – 1).



METRO BUILDING IN MOSCOW

1901. Russian engineers P. Balinsky, G. Guirshson, and V. Pechkovsky presented projects of metro building in St. Petersburg. Engineers A. Antonovich, N. Galinevich, and N. Dmitriev made a project of the construction of an outstreet rail way in Moscow.

1902. Moscow authorities accepted for consideration a project of metro proposed by P. Balinsky and architect E. Knorre, including the building of four diametric and one circle lines totalling 105 km long.

1902, August. Decision of the Moscow City Duma – Mr. Balinsky was turned down.

1912. Moscow City Duma published the terms of competition for metro building in Moscow.

1914-1918. World War I.

1918-1922. Civil War in Russia.

1925-1930. Experts K.

Myshenkov and S. Rozanov of the Department of Moscow Urban Roads and Tram Network developed a draft project of metro. The project included the building of four diametric and one circle lines along Sadovoye Koltso (Garden Ring) totalling 50 km long.

1931, June. Decision of the Plenum of the Central Committee of the All-Union Communist Party (Bolsheviks) concerning metro building. L. Kaganovich, a member of the Politburo of the Central Committee of the Communist Party, who headed the People's Commissariat (ministry) of Communications at that time, was appointed a party curator of the building.

1931. Herbert Wells came to Moscow 10 years later his first visit. The English novelist was informed of the plans to build underground in Moscow and advised hospitable hosts to abandon their idea of utopia and buy 1000 buses in England to organize normal passenger transportation in the city.

1931, November. The first section of the metro was laid in the

yard of an unremarkable small house on Rusakovskoye Shosse (13a) not far from the Mitkovo railway overpass.

1933, December 31. Several vertical shafts and tunnels of 443 m long were built.

1934, October 15. The first trial train ran from Kalanchevskaya Ploshchad to Sokolniki.

1934, December 28. The tunnel works were completed for more than 96%. The tunnel of 10.9 km long was built.

1935, May 14. The grand meet-



Moscow metro as conceived by engineer Peter Balinsky. Artist Nikolay Karazin, 1902



Subbotnik during the building of the metro in Volkhonka



At the building of the second phase of the metro



Meeting devoted to the 24th Anniversary of the October Revolution, Station Mayakovskaya, 6th November 1941

ing devoted to the completion of the construction of the first phase of the Moscow Metro. The participants of the meeting said – «We want the structure, which is larger than any palace, theatre serves millions, raises the spirit of human being... Bourgeois try to depict us, Bolsheviks, proletarians, as barbarians, culture destroyers. This lie of our enemies is unmasked once and for all. Quite the contrary, we are striving for new culture... The new station, the originality. Mr. Bourgeois, where are barracks, destruction of personality, creation, art?»

1935, May 15. In 5.35 a.m. doors of 11 stations of the 1st phase of the L.M.Kaganovich Moscow Metro were opened, totalling 11.6 km long and 13 stations.

1937. Three stations of the 1st phase – Sokolniki, Krasny Vorota, and Dvoretz Sovetov (Kropotkinskaya since 1957) – were awarded with Grand Prix of the World Exhibition in Paris.

1937, March. The section of the 1st phase was extended from Imeni Komintern (now Alexandrovsky Sad) to Kievskaya. The 2nd phase of the Moscow Metro was completed. The tunnels totalling 16.8 km long. The stage between the deep station of Ploshchad Revolutsii (2nd phase) and the shallow station of Ulitsa Komintern (1st phase, now Alexandrovsky Sad) appeared to be inadmissibly steep. Hence, the new deep line was built from Ploshchad Revolutsii to the Kievsky Railway Station with stations Arbatskaya, Smolenskaya, and Kievskaya.

1938, summer. The construction of the 3rd phase was begun – northeast to the Izmaylovo region.

1940's. The daily passenger flow in the metro reached 1 million passengers. The volume of traffic is 30 train pairs per hour. Till the beginning of the Great Patriotic

War, all the tunnels from Ploshchad Sverdlova to Zavod imeni Stalina (now Teatralnaya – Avtozavodskaya) of 6.3 km long were completed as well as 70 per cent of the underground structures from Kurskaya to Izmaylovskaya (later Izmaylovsky Park, since 6th May 2005 – Partizanskaya) of 7.1 km long. Till the end of the war the metro lines totaling 13.3 km long and seven stations-palaces were built. The metro operated in a war regime. During daytime – public conveyance, at night – bombproof shelter. In 1941, 217 children were born in the metro between the beginning and the end of air-raid warning. The Headquarters of Moscow air defense and several departments of the Red Army General Headquarters were located at station Kirovskaya (now Chisty Prudy) during nearly the whole war. The usual passenger service was not interrupted. The section from Ploshchad Sverdlova to Zavod imeni Stalina (now Teatralnaya – Avtozavodskaya) of 6.3 km long was opened. The Gorkovskaya Line became the Gorkovsko-Zamoskvoretskaya Line. The section from Kurskaya to Izmaylovskaya (later Izmaylovsky Park, now Partizanskaya) of 7.1 km long was opened. The construction of the Circle Line from Kurskaya to Park Kultury began.

1950's. All the stations of the Circle Line of the Moscow Metro were opened. The section from new Arbatskaya via Smolenskaya to the Kievsky Railway Station was built. So an unplanned shallow line, called the Arbatsky Radius (from Kalininskaya to Kievskaya), appeared, which later was renamed to the Kirovsko-Frunzenskaya Line. The Kirovsko-Frunzenskaya Line was extended from Park Kultury to Universitet. Both the banks of the Moskva River were linked with a two-layer bridge. The lower layer was occupied by station



Air-raid shelter at Station Mayakovskaya during World War II



Headway without taking into account stop at stations is 40 seconds



Okhotny Ryad



Bulvar Dmitriya Donskogo

Leninskiye Gory (now Vorobiev Gory). The new line, called Rizhskaya, from Botanichesky Sad (now Prospekt Mira) to VSKhV (now VDNKh) was opened. The section of the future Filevskaya Line (11.4 km) was built from Kievskaya to new residential area Fili-Mazilovo.

1960's. The new technology of shield driving with immediate «lining» of tunnels was first used at the construction of the new Kaluzhsky Radius. If properly used, this «Moscow» technology saved up to 50% of time and money compared with the

«Berlin» one. The section (8.1 km) from Kaluzhskaya (now Oktyabrskaya) to Novye Cherepukhino was opened. The new Zhdanovskaya Line from Taganskaya ti Zhdanovskaya (now Vykhino) was built.

1970's. The section from Belyayevo to Medvedkovo was opened. The Tagansko-Krasnopresnenskaya Line began operating from Barrikadnaya to Planernaya. A new station, called Gorkovskaya (now Tverskaya), was built in the existing Gorkovsko-Zamoskvoretskaya Line. The station and transit to station Pushkinskaya were constructed without breaking train operation. The Head of the Moscow Metro Building Enterprise of that time P. Vasyukov said that it was the same as to add one more bead to a necklace without breaking a string. The new Kalininskaya Line (11.4 km) from Marxistskaya to Novogireyevo was built.

1980's. The Kaluzhsko-Rizhskaya Line was completed. Sections of the new Serpukhovskaya Line were opened. The section from Kashirskaya to Krasnogvardeyskaya was put into operation. The Filevskaya Line was extended to Krylatskoye.

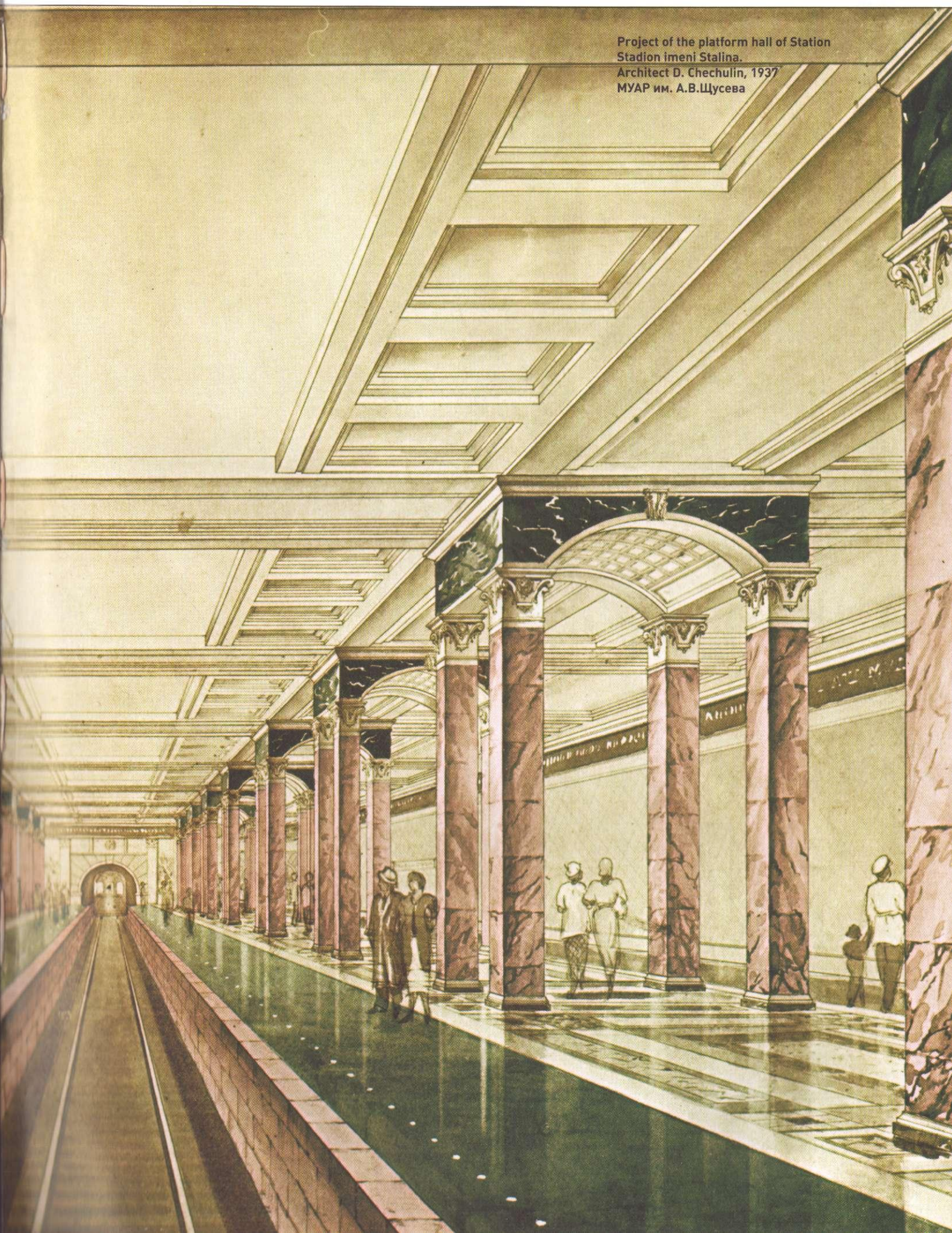
1990's. Several Line were extended – Sokolnicheskaya Line to Ulitsa Podbelskogo, Kaluzhsko-Rizhskaya Line to Bittsevsky Park, Serpukhovskaya Line to Altufievo. The Serpukhovsko-Timiryazevskaya Line appeared. The new Lyublinskaya Line from Chkalovskaya to Volzhskaya was opened.

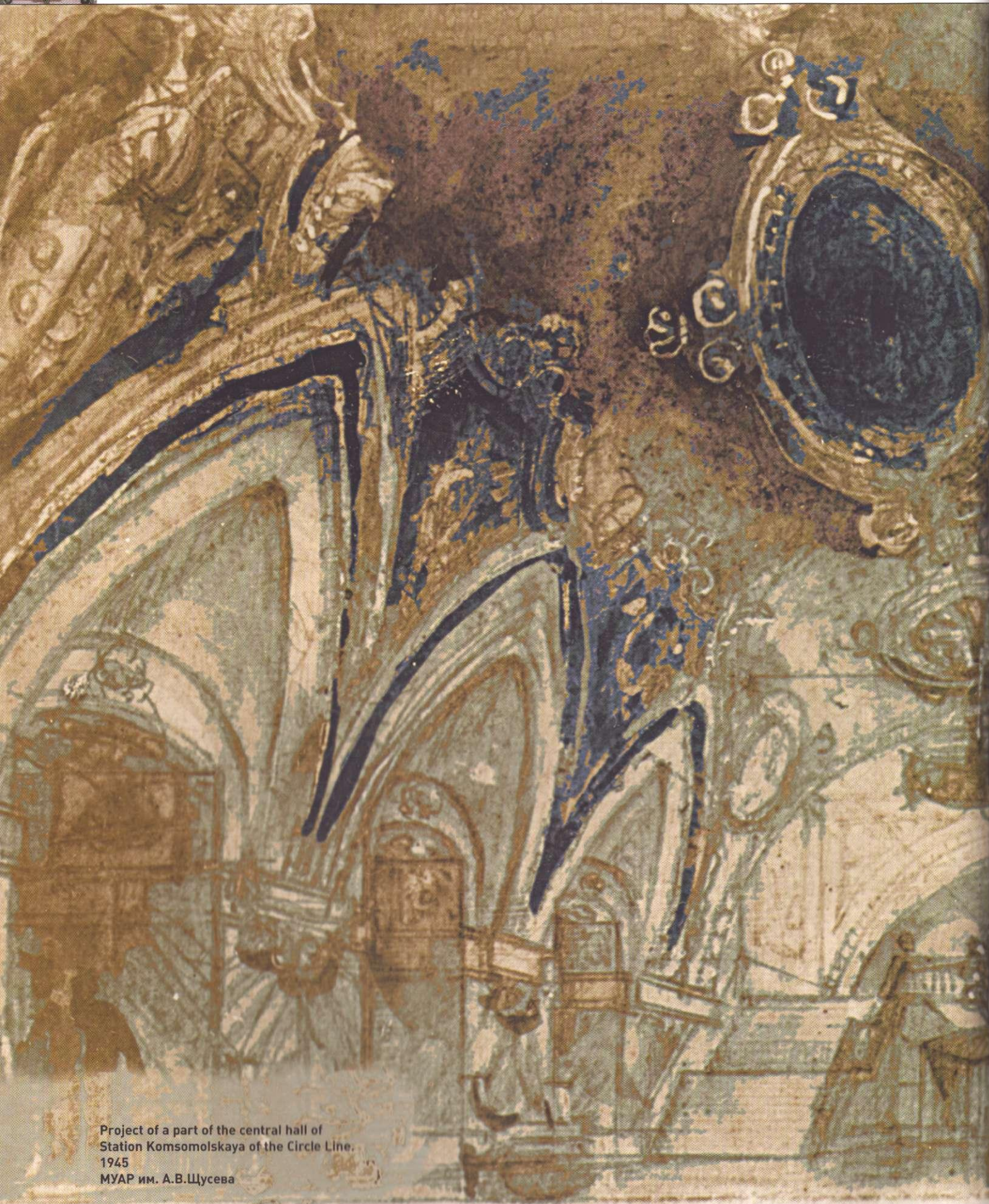
2001-2003. The Serpukhovsko-Timiryazevskaya Line was extended to Bulvar Dmitriya Donskogo. The metro overstepped the limits of the Moscow Circle Road. From Bulvar Dmitriya Donskogo trains ran far south to South Butovo by light metro. The Arbatsko-Pokrovskaya Line was extended from Kievskaya to Park Pobedy.



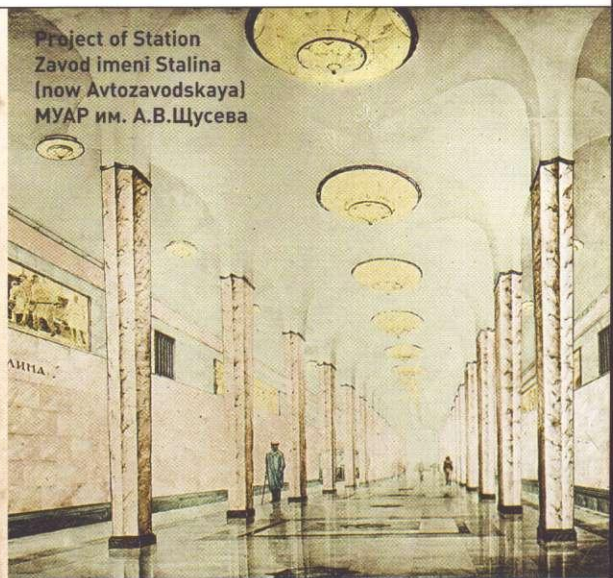
PROJECTS – yesterday and tomorrow

Project of the platform hall of Station
Stadion imeni Stalina.
Architect D. Chechulin, 1937
МУАР им. А.В.Щусева

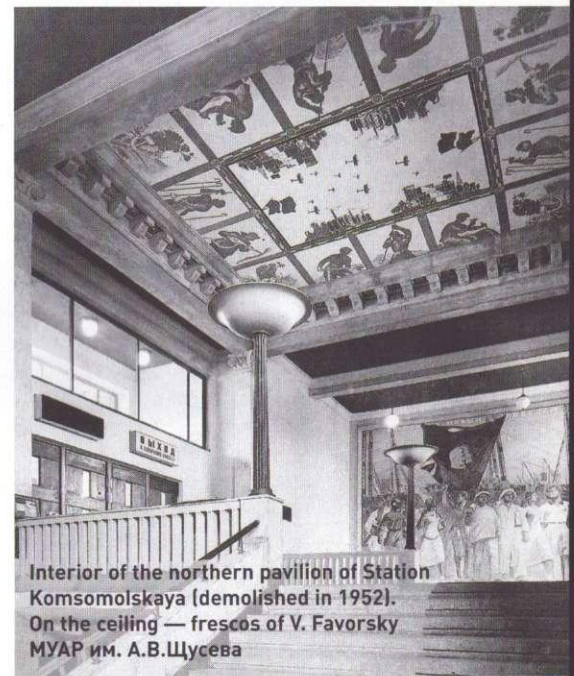




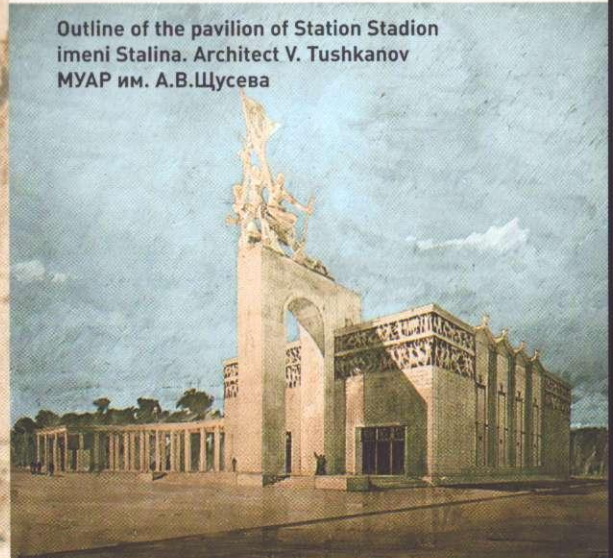
Project of a part of the central hall of
Station Komsomolskaya of the Circle Line.
1945
МУАР им. А.В.Щусева



Project of Station
Zavod imeni Stalina
(now Avtozavodskaya)
МУАР им. А.В.Щусева



Interior of the northern pavilion of Station
Komsomolskaya (demolished in 1952).
On the ceiling — frescos of V. Favorsky
МУАР им. А.В.Щусева



Outline of the pavilion of Station Stadion
imeni Stalina. Architect V. Tushkanov
МУАР им. А.В.Щусева

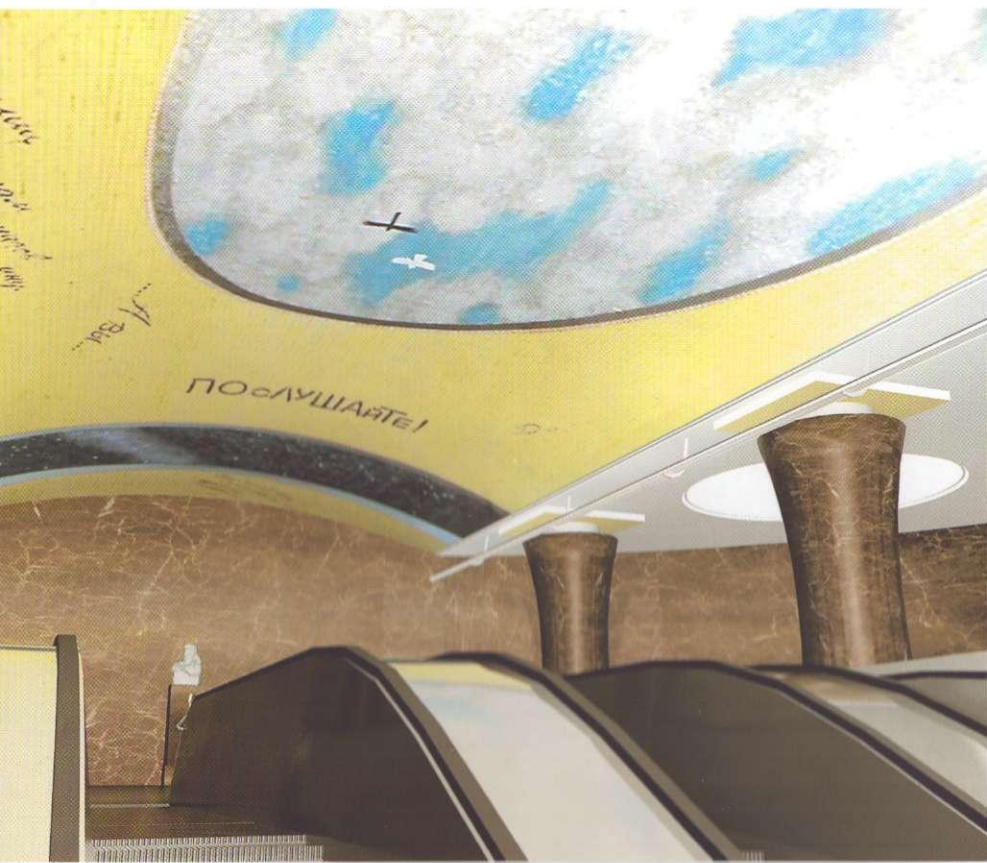


Project of mini-metro Station
Mezhdunarodnaya. Architects A. Vygodov,
L. Borzenkov
«МЕТРОГИПРОТРАНС»

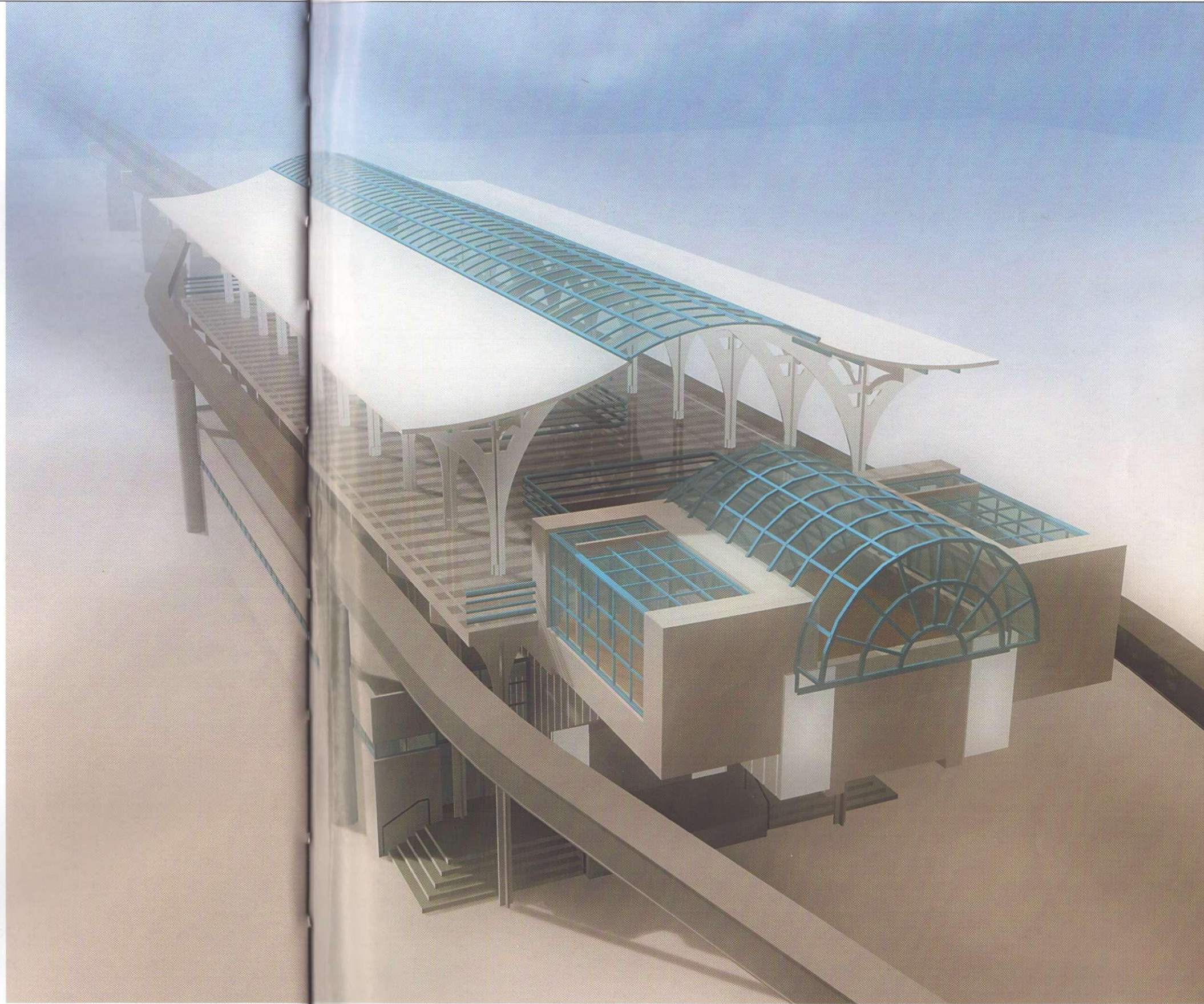




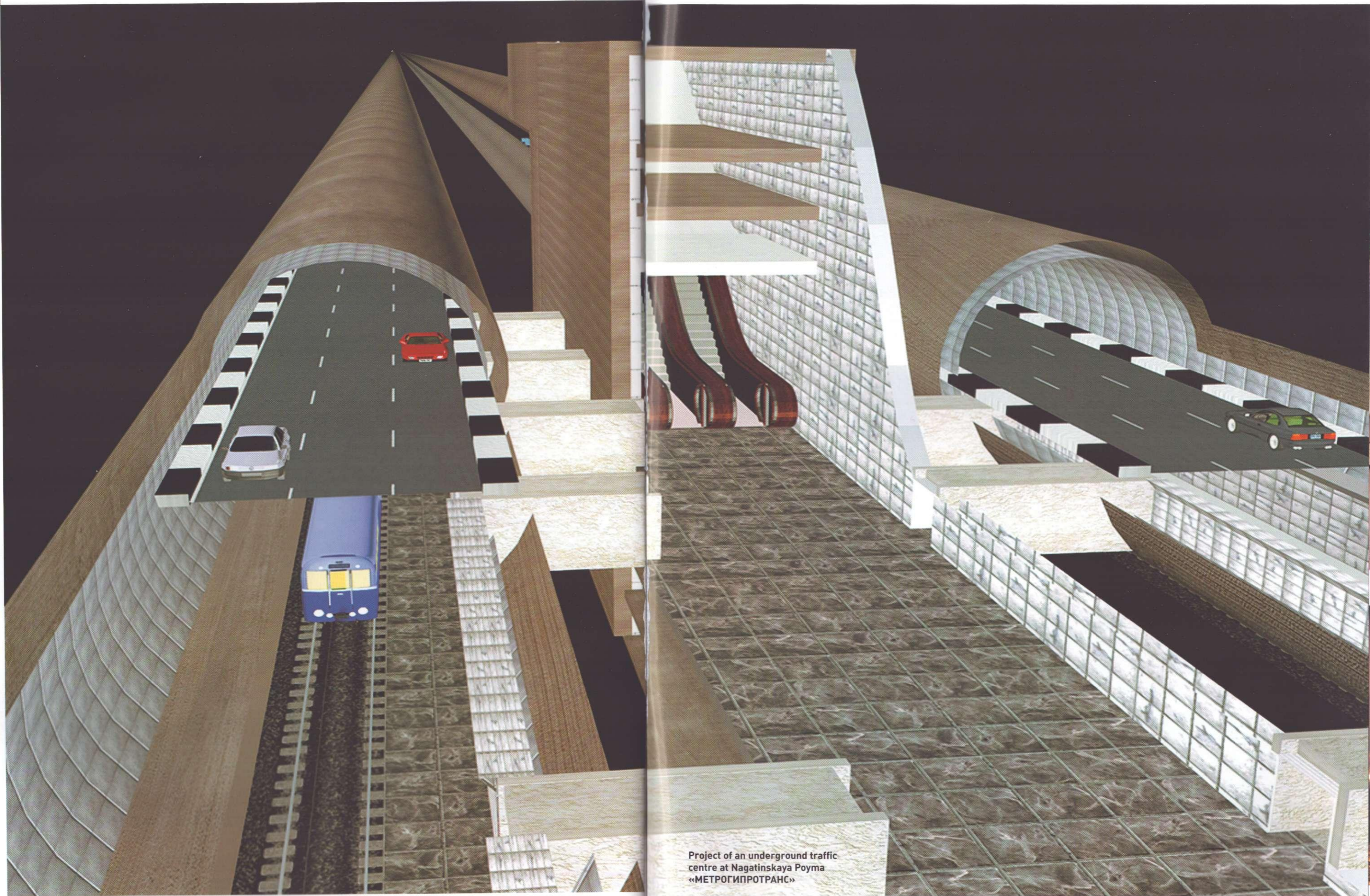
Project of Station Strogino with complicated lamps on the vault



Project of entrance hall of the second output of Station Mayakovskaya «МЕТРОГИПРОТРАНС»



Project of Moscow monorail road Station «МЕТРОГИПРОТРАНС»



Project of an underground traffic
centre at Nagatinskaya Poyma
«МЕТРОГИПРОТРАНС»



PAVILIONS, entrance halls

The entrances of the stations of the Moscow Metro are designed as ground pavilions (detached or built in later erected buildings) or ground and underground entrance halls. The ground pavilions of the Moscow Metro were specially or occasionally designed in such a way that look like Assyrian and Babylonian (Sportivnaya and Frunzenskaya till the 1980's) or antique (Chistye Prudy and Novoslobodskaya) temples, triumphal arch (Semenovskaya, Krasnoselskaya, many stations of the Circle Line – Taganskaya, Belorusskaya, etc.), or simultaneously triumphal arch outside and Christian temple inside (Kurskaya of the Circle Line), classicism rotunda (Krasnopresnenskaya), mollusc shell (Krasnye Vorota), and park pavilion (Kropotkinskaya). The frequent occurrence of the triumphal arch among old Moscow ground pavilions of the metro is easily explained – these stations were built during World War II or in the first years after it finished.

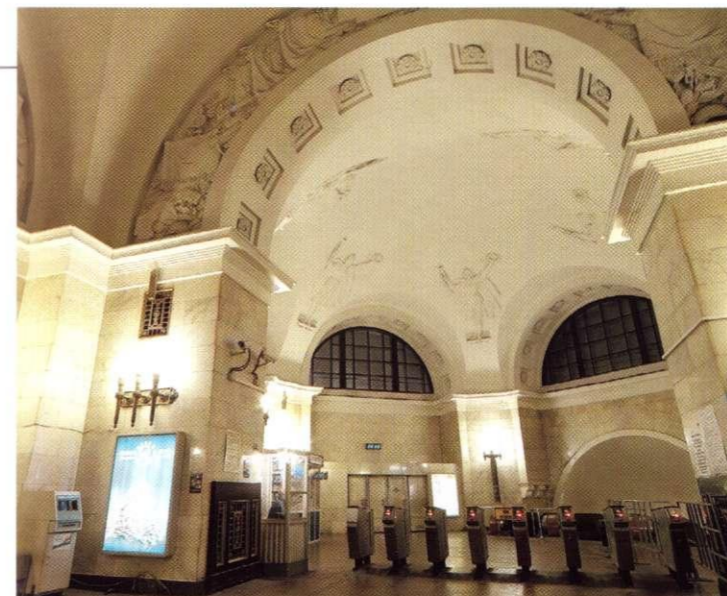
The pavilions inside are either with one large entrance hall or several separate halls – cash hall, turnstile hall, escalator hall. All cash desks of the metro are designed and built together with stations. It means that, for example, in Sokolniki or Lubyanka they remain the same as 70 years ago – oaken glassed desk and oaken counters. The only improvement in the exterior is a Plexiglas plate fixed in front of the window and a hole in the glass. To pay fare one need oddly bend a hand giving money and loudly say about the kind of ticket needed. It is not convenient for a passenger but cashiers (usually aged ladies) feel themselves protected from unbalanced people or hooligans. Cash desks and an entrance hall is comfortably and effectively designed in station Bulvar Dmitriya Donskogo. Several cash desks jut out by semicircle toward the entrance hall, so it is difficult to create a crowd before them. The problem of security in present-day cash desks is cardinally

solved. A cashier is behind transparent glass. One should put money into a tray like in banks and speak through talkback equipment. There are two kinds of turnstiles used in the Moscow Metro – opened (old) and closed (new). An opened turnstile holds back a passenger without a ticket by quickly closed leaves. A turnstile works with noise that intensifies a trap effect. At the moment of blow several first notes of Oguinsky's polonaise sound «in consolation».

A closed (new) turnstile is much more friendly to a passenger. It simply keeps a passenger out. It opens gates only when a passenger has paid fare (touched a validator with a transport card or put a magnetic ticket in it). All the entrance halls of the Moscow Metro have special police rooms with a shift. There are also public call-boxes in an entrance hall. They are valid for city, long-distance, and international calls.



Bulvar Dmitiya Donskogo. Cash hall



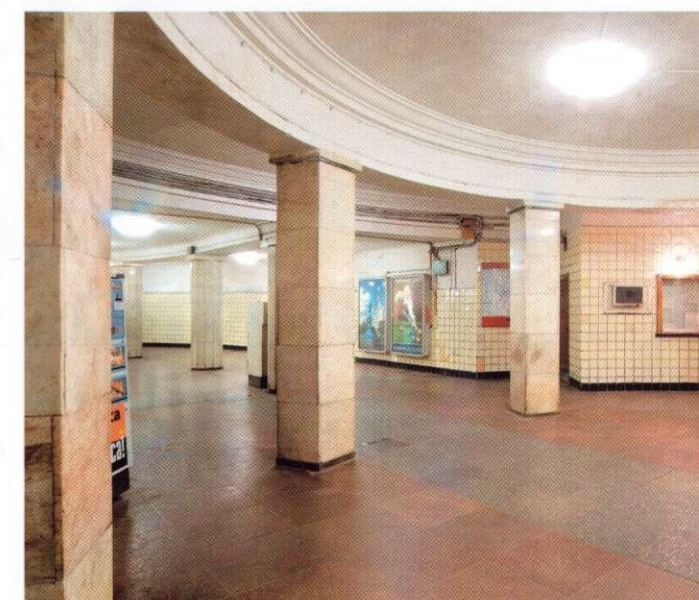
Oktyabrskaya of the Circle Line. Escalator hall



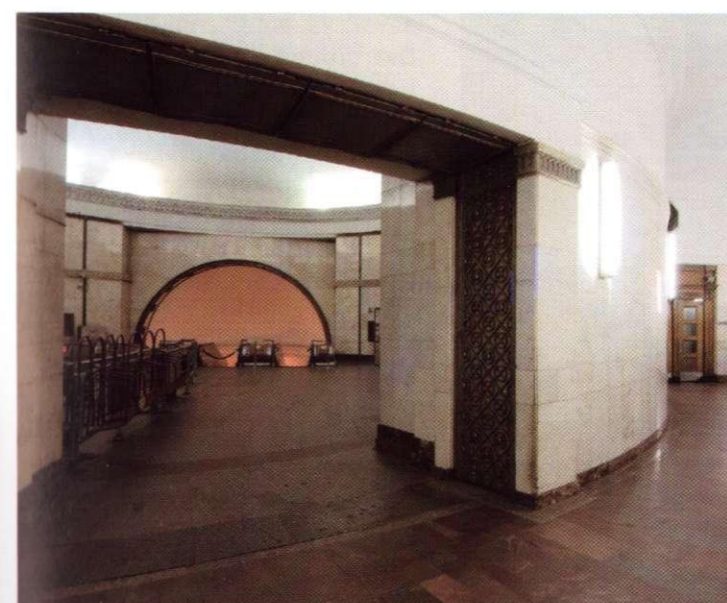
Oktyabrskaya of the Circle Line. Entrance portal



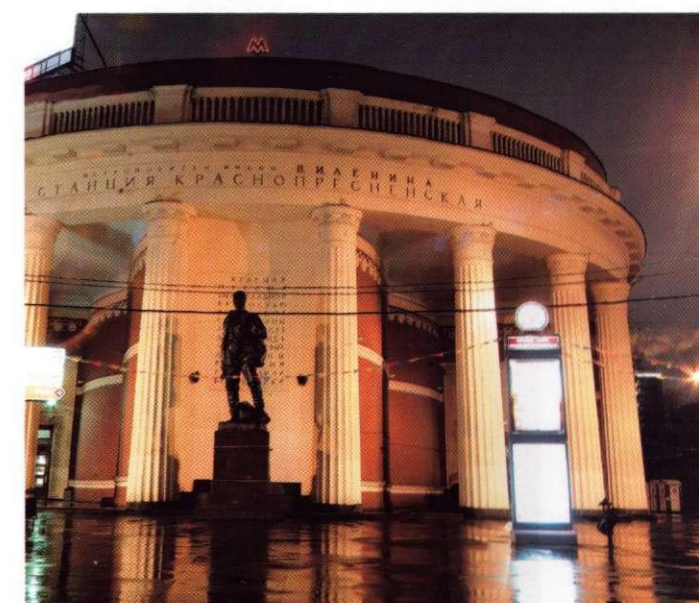
Kropotkinskaya. Ground pavilion



Kropotkinskaya. Cash hall



Krasnopresnenskaya. Escalator tunnel



Krasnopresnenskaya. Ground pavilion



Mayakovskaya. Deep column station

KINDS OF STATION



Yasenevo. Shallow column station

There are three kinds of stations in the Moscow Metro – ground, over-ground (on overpasses, bridges), and underground (deep and shallow). Ground stations are some stations of the Filevskaya Line (Bagrationovskaya, Filevsky Park, Pionerskaya, Kuntsevskaya, etc.), Izmaylovskaya. Overground stations are the stations of the light metro (Butovskaya Line) located on overpasses – Gorchakovskaya, Buninskaya Alleya, etc. (excluding Starokachalovskaya). Passengers at these stations go down to the entrance halls with escalators. One station – Vorobiev Gory (earlier Leninskiye Gory) – is located on a bridge across the Moskva River. Most of the stations of the Moscow Metro are underground, such as Sokolniki, Kropotkinskaya, Sportivnaya, Paveletskaya, Belorusskaya, Avtozavodskaya, Orekhovo, etc. Stations may have platforms in

the middle, between tracks, and aside both tracks. Most stations have platforms in the middle. In this case, tracks in the opposite directions are located on both sides of the common platform. They are Mayakovskaya, Dinamo, Krasnye Vorota, Okhotny Ryad, Bulvar Dmitriya Donskogo. Light metro seems to be the most promising kind of rapid transit transport in densely populated outlying areas (actually suburbs) of the city. Such metro is much cheaper (3 to 6 months compared with 1.5 to 2 years and more for deep underground) and is built much quicker (18 million dollars compared with 40 million dollars for shallow stations and 90 million dollars for deep stations) than underground stations and tunnels. A special variety is stations with four tracks and two platforms, such as Kashirskaya, Tretyakovskaya, and Kitay-gorod. Such stations are built to make the transit from one line of the

metro to other easier and quicker. Passengers in the first station cross the platform for 10 to 30 seconds and transit from the Kakhovskaya Line to the Zamoskvoretskaya Line (and vice versa), in the second station – from the Kaluzhsko-Rizhskaya Line to the Kalininskaya Line (and vice versa), and in the third station – from the Kaluzhsko-Rizhskaya Line to the Tagansko-Krasnopresnenskaya Line (and vice versa). If a passenger needs to transit to the other line but in the direction opposite to the common one, he/she must go up to an overpass and go down to the station of the same name but with opposite direction. Stations with side platforms have tracks located between the platforms. They are stations of the Filevskaya Line – Alexandrovsky Sad, Studencheskaya, Kutuzovskaya, Fili. There are uncommon stations in the Moscow Metro – Partizanskaya (earlier Stadion imeni

Stalina, Izmaylovsky Park) and Polezhayevskaya. They differ from other Moscow stations because they have three tracks and two platforms between them. Partizanskaya was built at the early 1930's and was designed for a great passenger flow. The General Plan of Moscow Development and architects' ideas was to build the world's largest sports arena – Stalin Stadium. Station Polezhayevskaya was built as transit. It had to connect the Tagansko-Krasnopresnenskaya Line with a branch toward the resort region called Serebryany Bor. By depth and types of bearing stations of the metro are classified as pier, column, mixed, arched, and column shallow. A pier station usually consists of three parallel tunnels – two with tracks and one station (Krasnye Vorota, Frunzenskaya, Dinamo, Baumanskaya). All three tunnels are built separately. Then passes are made between track and



Alexandrovsky Sad. The only underground station in Moscow with side platforms.



station tunnels. Pillars between passes are pylons – monumental, massive structures at the side of a gate, vault, and pass. The sizes of passes and pylons depend on a projected passenger flow and strength of ground. The more passengers projected, the wider passes and narrower pylons. The weaker grounds, the more massive pylons. Ground in pylons is often strengthened or replaced with concrete structures.

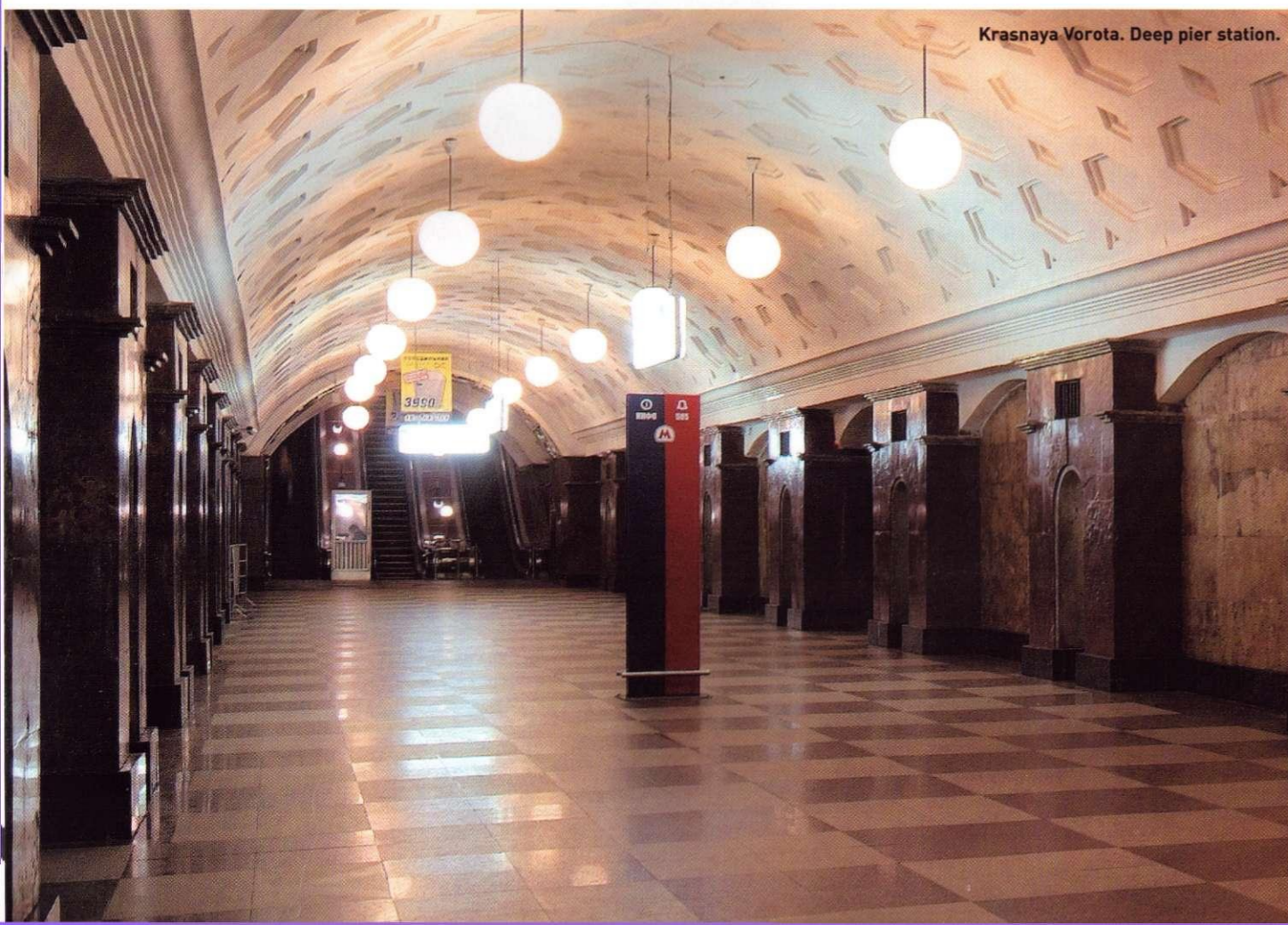
A column station is a common space which includes track and station tunnels. They intersect each other as Olympic rings without a ground dam between them. Instead of it, lines of columns support vaults. The world's most perfect column stations are in Moscow (Kropotkinskaya – former Dvoretsov, Mayakovskaya, Avtozavodskaya). There are also mixed stations in Moscow – pier and column, pier and wall, column and wall. The

construction is different in details but the idea is to make bearings less massive and the inner volume larger (Paveletskaya of the radial line, Semenovskaya).

An arched (one-span) station is built not deep underground but without stripping ground. An arched station is a common cylindrical space. Its vault is supported by the walls of excavation or its bottom (plate, trough, counter-vault). Such construction conforms to the architectural ideal but it can be built only in stable ground, without high ground pressure (Biblioteka imeni Lenina, Aeroport). A one-span shallow station is a station without internal bearings with a flat or arched vault (Konkovo, Annino, etc.). A column shallow station has one line of columns (two-span) or two lines of columns (three-span), which support a flat ceiling (Orekhovo, Bulvar Dmitriya Donskogo).



Kitay-gorod. Pier and column station



Krasnaya Vorota. Deep pier station.



Krasnogvardeyskaya. Arched station



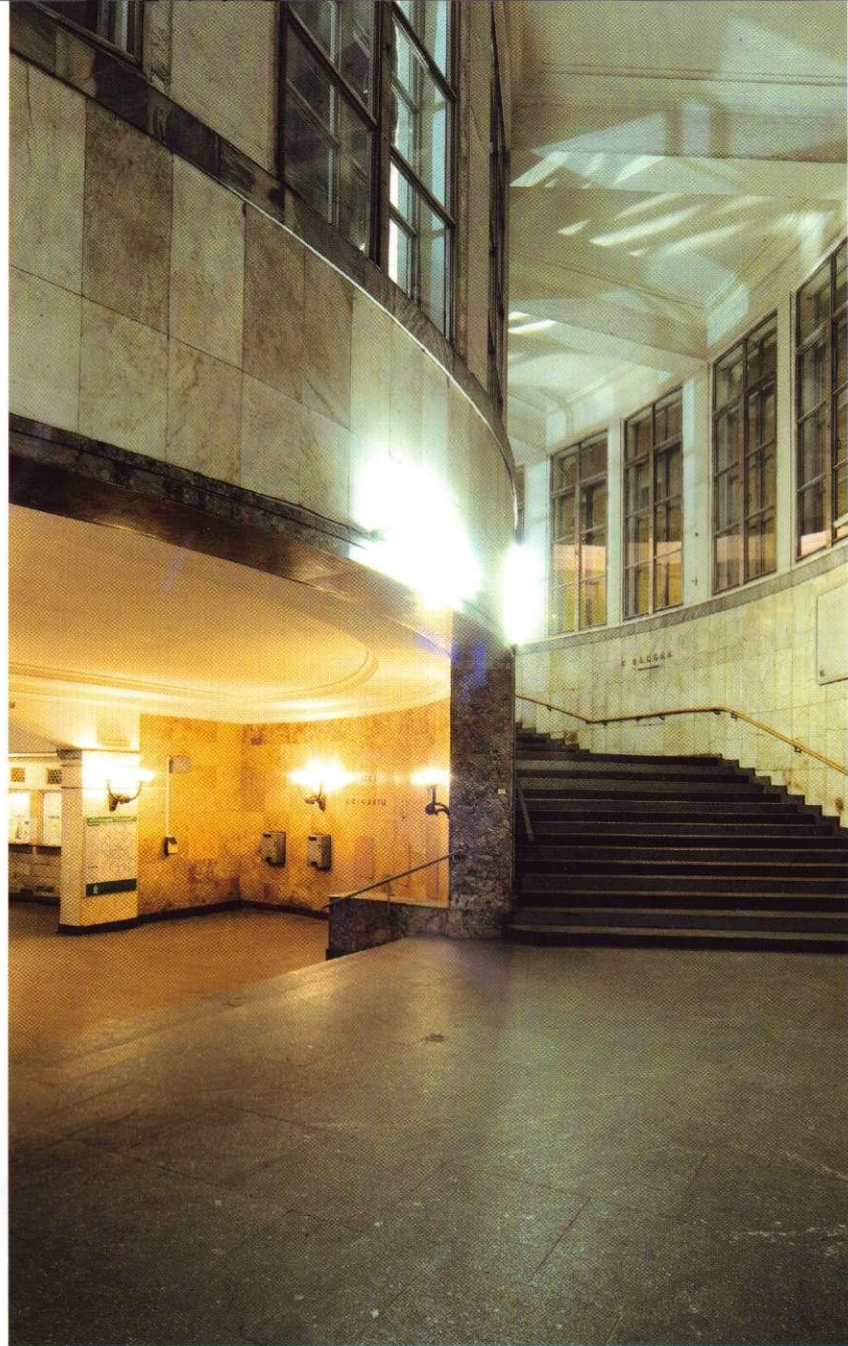
SOKOL

Date of opening –
11th September 1938

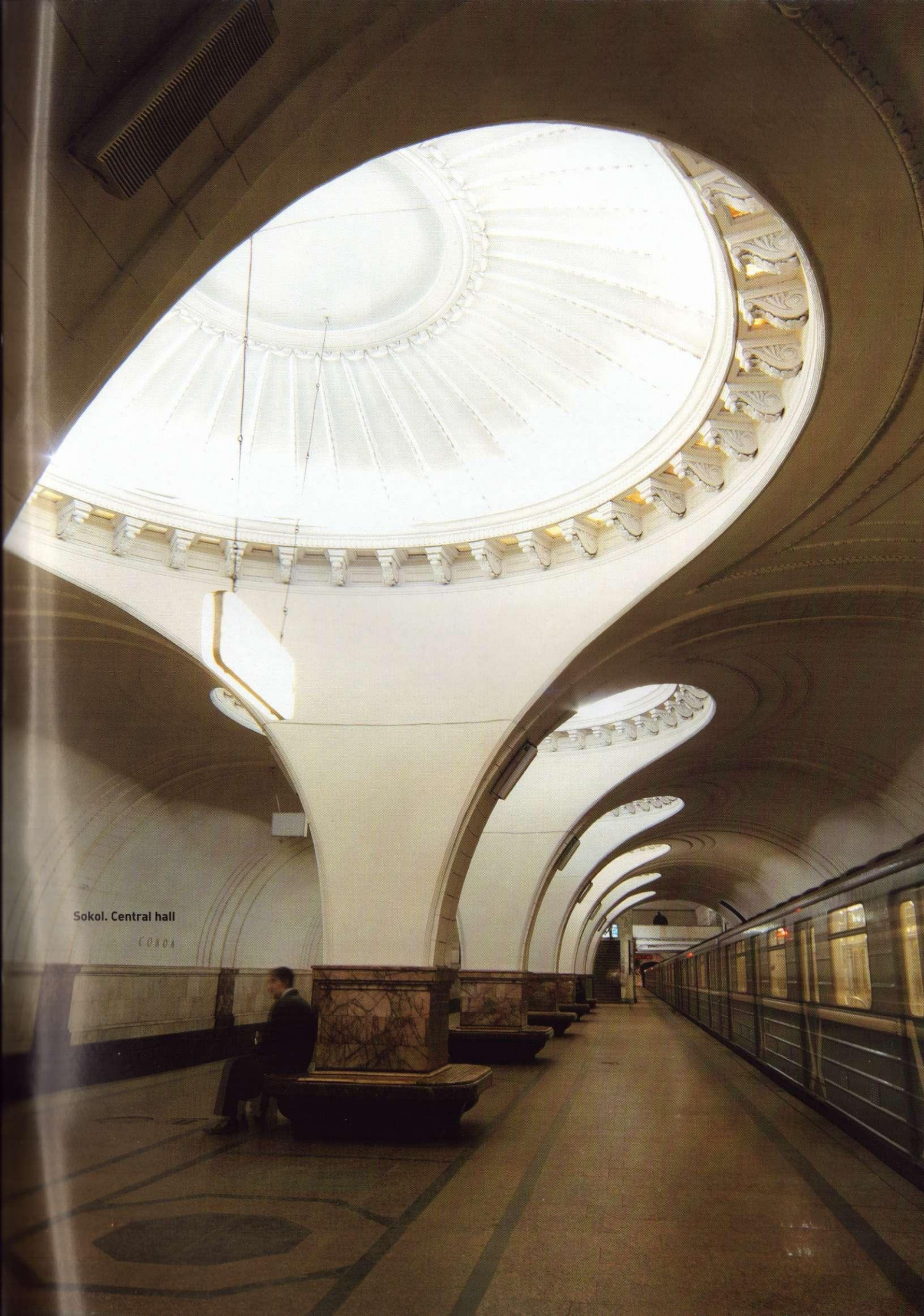
**Construction
of the station –**
shallow, column, two-span

**Architects of the under-
ground part –**
V. Andreyev, V. Polikarpova
and K. Yakovlev

The station was named by the first in Soviet Russia cooperative village – Sokol built near the station in 1923-1930's. The cooperative was established by known scientists, painters, and writers. Houses were built by projects of architects V. Vesnin and N. Markovnikov. The construction of Sokol is not typical of the Moscow Metro. Formally it is two-span station with the central platform. It means there is no central hall as such. There are two track platforms divided by columns between them. The plan of the engineer is clearly seen from the bridge, which serves as an exit to the city – two arches of the track tunnels connected with the common entablature. However after going down, one understand that the construction of the station is much more complicated. The quite massive near bases columns quickly broaden upward like funnels, so the ceiling appears to be a line of hip-



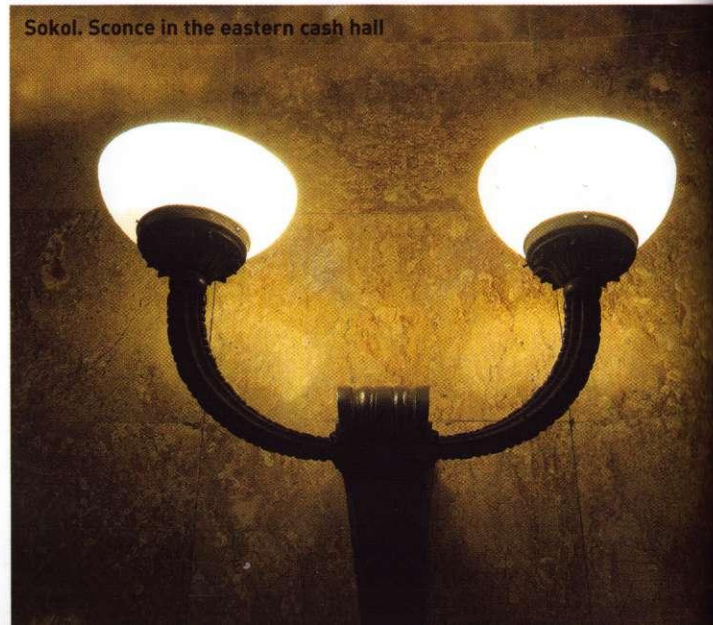
Sokol. Cash hall of the eastern ground pavilion



Sokol. Central hall



Sokol. Eastern ground pavilion



Sokol. Sconce in the eastern cash hall



roofs. Unfortunately, the columns and hip-roofs are too close to each other that creates the feeling of tightness. The station was built for small traffic flow – it was a terminal station in the 1930's and there was no population around. The columns are rounded with benches but they are uncomfortable for seating. Someone regularly treads on feet.

The station, passageways, and entrance halls are decorated with glazed ceramic tiles, light pink marble, and onyx from the Armenian Agamzaly Deposit, ranging from yellow-brown to pink-violet (travertine).



Sokol. Eastern entrance – exit

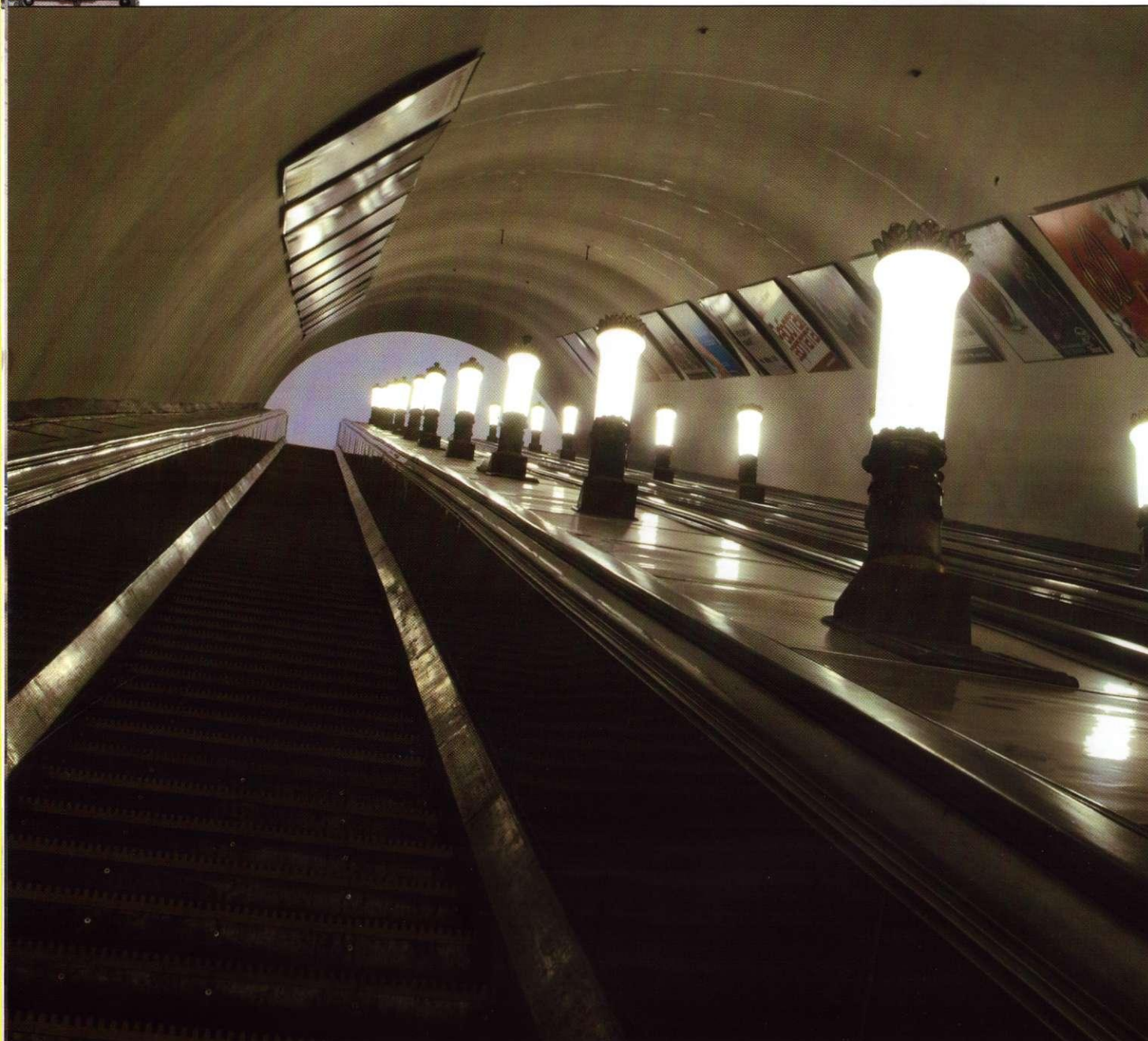
Sokol. Bridge leading to the exit to the city

STAIRCASES / ESCALATORS

When Soviet engineers of the 1st phase of the Moscow Metro chose an escalator as a major means of passenger transportation between the ground and platform, France-based company OTIS, knowing that Soviet Russia never manufactured such devices, offered 15 escalators for four million golden roubles. The Soviet Government rejected such offer. orders to develop and manufacture escalators were given to the Moscow Pod'emnik Plat (6 items) and Leningrad Krasny Metallist Plant (9 items). All technical documentation which experts had was advertising leaflets and impressions of people which conveyed by foreign escalators. Nevertheless escalators were manufactured, tested, and installed in deep stations of the 1st phase. Nowadays four main types of escalators with numerous modifications are used in the Moscow Metro. They total more than fifty constructional versions of such devices. The first Soviet escalators – «Э1 Н-10» and «Э1 Н-30» (used

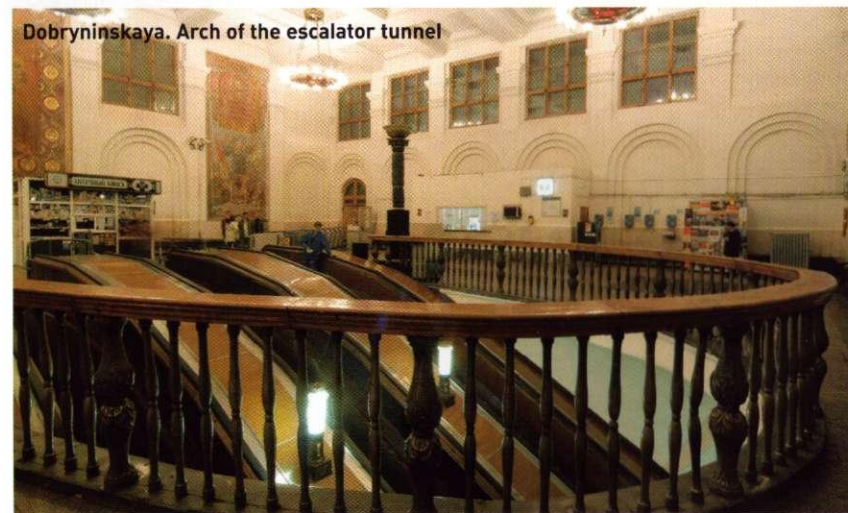
in 1934-1956) – surpassed foreign ones in lifting height 30 m at Lubyanka). In the world passengers from 15 m deep and more were transported with lifts and paternosters. In the Moscow Metro escalator tunnels were initially projected for three escalators – one for descending, one for lifting, one for reserve. The last escalators «Э1 Н-10» were replaced in 1990. Other type of escalators used in the Moscow Metro are «ЭМ» (1952-1966), «ЭТ» (since 1978), escalators of small lift (used at the lift of 7 to 15 m), and new model «ЭТХ-3/75» whose construction is more compact than of previous ones with the same number of transported passengers. It allows installing four escalators in one tunnel instead of usual three. The longest escalators in Moscow are at Park Pobedy, the shortest ones are between the station layers. They connect the main passenger halls of the station with the underground entrance halls. There is a requirement for the Moscow Metro – if a passenger must lift at a height

of more than 7 m, a station should have escalators. Sometimes one escalator is not enough for transporting passengers to the surface by different reasons. Then two escalators at different levels are made, e.g., at Kievskaya of the Circle Line, Chekhovskaya. Unfortunately old regulations do not demand the installation of escalators at comparatively deep stations. For example, at station Aeroport a passenger must lift four flights of stairs with 11 steps in each (two of which are steep) to reach the entrance hall and two more flights to exit the street. However is explainable – the entrance halls were built just above the station within a dwelling house. The problem of separating passengers (incoming and outgoing) is very efficiently solved at station Sokolniki. The entrance and exit doors are made on different sides of the ground pavilion and the staircases are designed to exclude crossing people going up and down. An elevator for disabled people is made at station Altufievo.



Universitet. Escalator tunnel

Dobryninskaya. Arch of the escalator tunnel



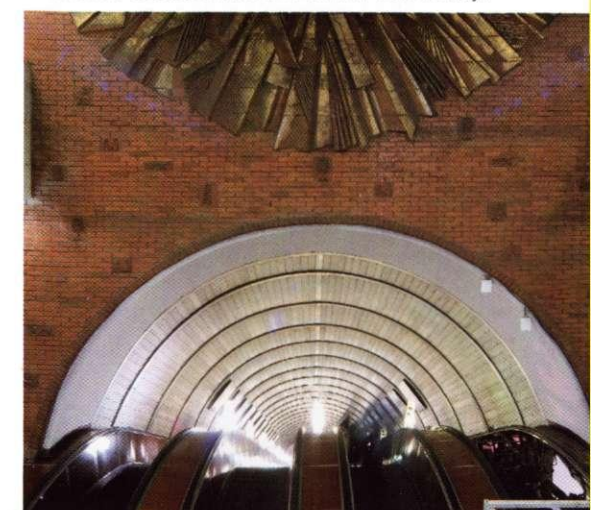
Nakhimovsky Prospekt. Northern exit to the city



Transit to Komsomolskaya of the radial line begins with a short escalator



Arch of the escalator tunnel at Station Borovitskaya





KIEVSKAJA, Arbatsko-Pokrovskaya Line

Date of opening –
5th March 1953

Construction
of the station – deep, pier,
three-span

Architects
of the underground part–

L. Lilye, V. Litvinov,
M. Markovsky,
V. Dobrovolsky

Transit to Stations Kievskaya
of the Circle Line and
Arbatsko-Pokrovskaya Line

Kievskaya is a cheerful, lively, and some vulgar station. It is decorated with a lot of gilt. Massive cubic pylons with oblique angles and slightly upper opening capitals are decorated by broad ceramic friezes, claret-coloured with gold. There are 12 pair frescoes in intricate frames on each pylon on the side of the distribution hall, which tell about the happy life in the Soviet Ukraine. If going from the eastern end of the station (passageway to the Circle Line), the first fresco on the left side is «Trio of Bandorist Girls», the opposite – «Girls Embroidering a Portrait of T. Shevchenko». Then – «Students» / «Ceramist Girls», «Fishermen on the Azov» (pay attention to Azov sturgeon, which is just extinct from the Earth) / «Foreman on a Building Site», «Cotton-growers» (cotton-plant has failed to get acclimatised in the Ukraine) / «Steel Makers», «Apple-gathering» / «Harvesting», «Vegetable-gathering» (the sizes of cabbage and pumpkins strike) / «Welcoming Miners with Flowers», «Kindergarten» / «Bricklayers», Ukrainian Dance» / «Welcoming an Officer», «Grain-selectionist» / «Vegetable-selectionist», «Veterinary and Cattle-breeders» / «Wine-makers», «Chemistry Scientists» / «Veteran and Students of a Vocational School», «Decorating Champi-

ons» / «Engineering Workers». The gallery is crowned by a fresco, which occupies the whole west blank end of the station – «People Festivity in Kiev». It shows joyful women in outstanding folk dresses and exultant children. There are also a monument of B. Khmel'nitsky, newly-erected buildings, and golden domes of the monastery. Cheerful crowd follows dancing girls who look at one place, but there is nothing. It is interesting that the sky at almost all the fres-

coes, including the central one, is golden, not blue. The pylons on the side of the platforms have the same gypsum frames but with images of field flowers of the Ukraine, such as poppy, cornflower, lungwort, rue, thistle, comfrey, primrose, forget-me-not, instead of figurative paintings. The station is illuminated by intricate golden chandeliers under all three vaults. This many-coloured splendour is emphasized by unpretentious white marble of the



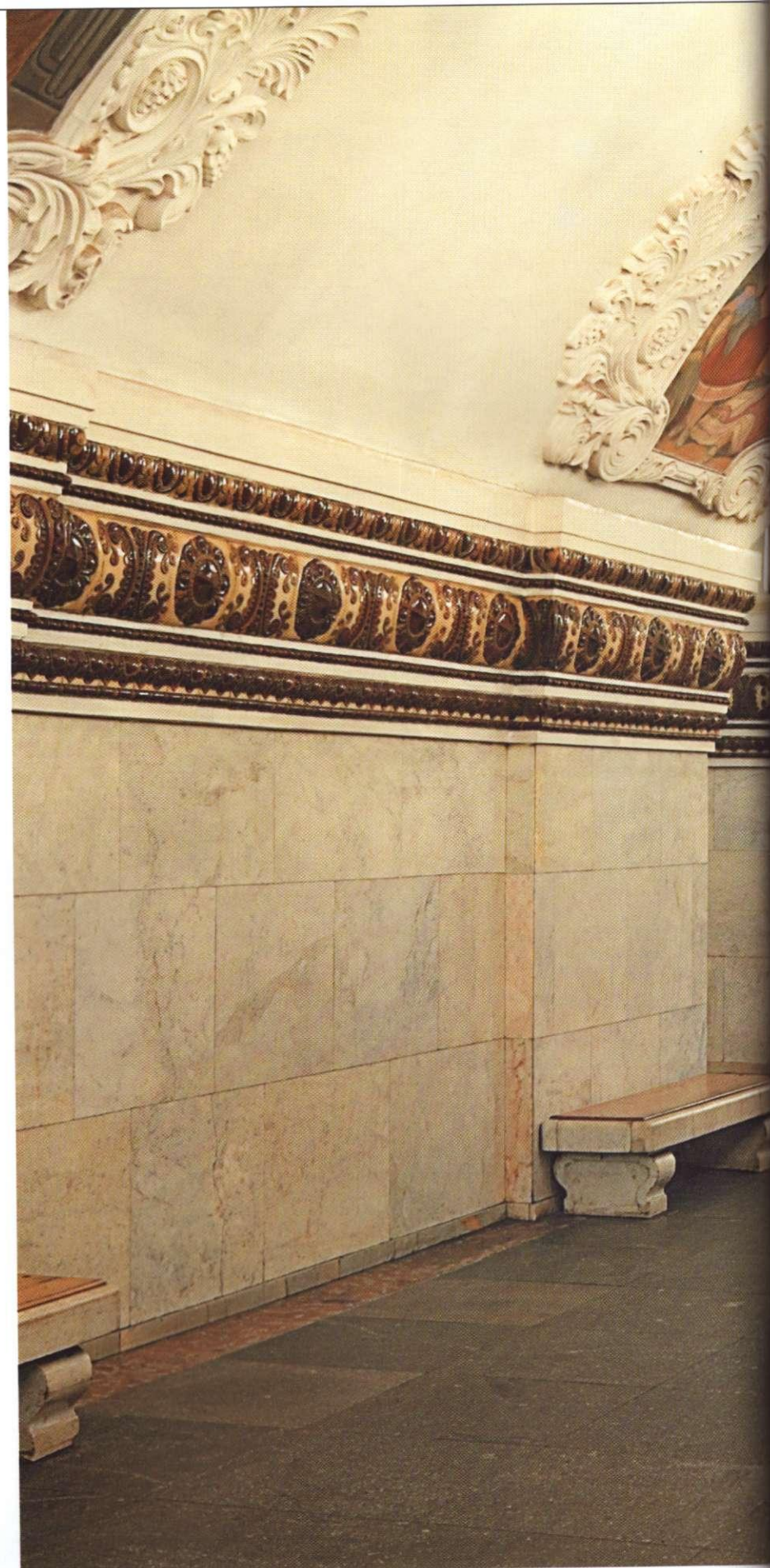
Kievskaya of the Arbatsko-Pokrovskaya Line.
Fresco of a pylon of the central hall

Kievskaya of the Arbatsko-Pokrovskaya Line. Frescos on the vault of the central hall





pylons and walls and monotonous grey granite of the floor. The passageway to the Circle Line begins at the eastern end of the station. If going to the Filevskaya Line by rules, one should use a bridge left of Fresco «People Festivity in Kiev». The stairway leads to a rather long corridor which ends at an intermediate escalator hall. Then, three escalators go down to Kievskaya station of the Circle Line and four escalators go up to a semi-circular hip-roof escalator hall. Turning right beyond the escalator, one appears at Kievskaya station of the Filevskaya Line. If you are in a hurry, you may breach the rules and use the other bridge located closer to the eastern end of the station. It leads to a corridor (which is sometimes closed) which ends at the same intermediate escalator hall but on the other side. The semi-circular hip-roof escalator hall is decorated like Kievskaya station of the Arbatsko-Pokrovskaya Line. It is decorated with a white marble colonnade of eight columns of the Ionic order. There is a wide mosaic frieze – «Donations to the Coat of Arms of the Soviet Ukraine» – on the wall lower the vault. Coat of Arms of the Soviet Ukraine is located over the arc of exit, opposite the escalator tunnel. From the left and right sides of it, Ukrainian smiths, reapers, engineering workers, children, pioneers, miners, gardeners, cattle-breeders, and engineers present things they made to the coat of arms. The figures of donors are designed in an Egyptian style. The composition itself shows whose portrait was at the place of the coat of arms earlier. The walls of the corridor which surrounds the hall are faced with very decorated onyx with intricately alternate white, grey, brown, and purple stripes.



Kievskaya of the Arbatsko-Pokrovskaya Line.





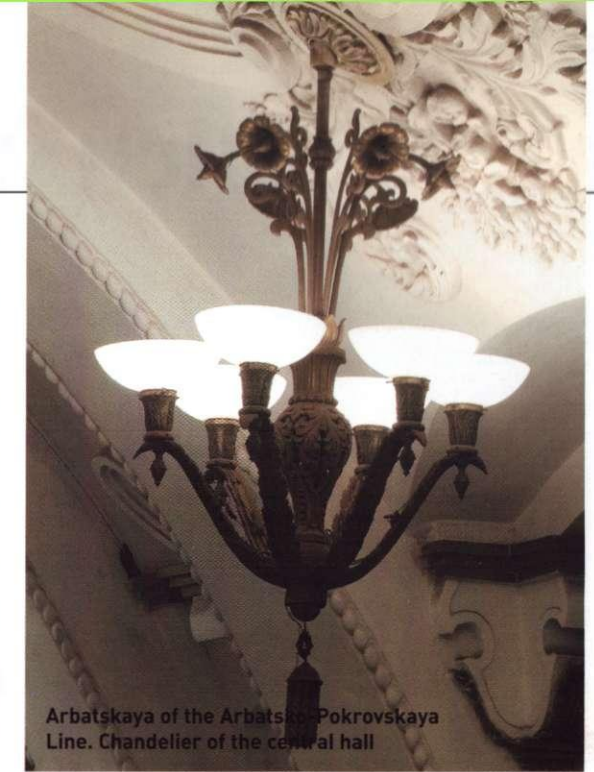
LAMPS

If the architects and designers were light-headed about the illumination of the metro or were completely functional, the Moscow Metro should not make such an impression upon passengers as it does now. The major hero of the underground art in Moscow is light, as well as colour, which manifests itself due to incident light. That's why the creators paid so much attention to illumination of the metro. The main task of designers is to house as many people as possible and do not let passengers come into collision, while the task of artists is to enlarge an underground space visually and save passengers from depressive feeling of dungeon and closed space. Several ways of illumination are used in the Moscow Metro. They are usual chandeliers suspended from vaults of track tunnels, central and entrance halls, transit passageways, sconces on walls, torchieres, hidden lamps in cornices and vault coffers, usual lamps in coffer shades, backlighting through thin plates of mica or calciphyry, small

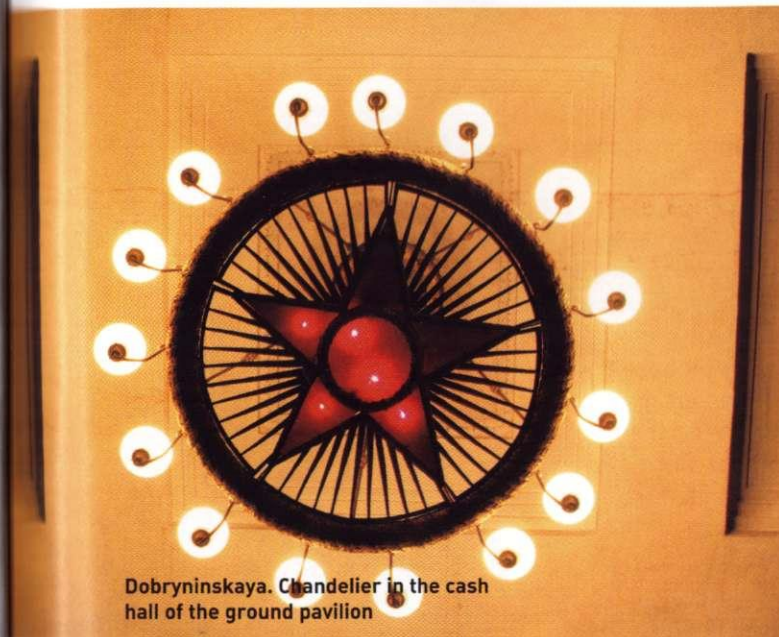
searchlights for backlighting mosaics, illumination of stained-glass windows, light reflected from polished or reflecting surfaces, etc. The sources of light in the Moscow metro are luminescent and halogen lamps, as a rule. Earlier usual incandescent lamps were used. However owing to the high power supply, they were replaced with glow-discharge lamps and tubes at most stations. The replacement of sources of light immediately affected the appearance of many stations. Marble decoration, mosaics, and stained-glass windows began to look in the light of modern lamps differently than previous years. Masonry, pattern and colour of panels acquired other shades. It is clearly seen on colour photos of stations of earlier years. The most interesting chandeliers are at Komsomolskaya of the Circle Line (luxurious chandelier below a shining ceiling star near the exit, chandeliers with yellow inserts of pastes in the ground pavilion), Belorusskaya of the Circle Line (wreath chandeliers), Taganskaya of the Circle Line

(look like old-fashioned wick lamps), Paveletskaya of the Circle Line, Dobryninskaya (saucer chandeliers with army stars), Kievskaya of the Circle Line, Arbatskaya of the Pokrovsko-Arbatskaya Line. Chandeliers which look like Chinese lanterns are at Park Kultury of the Circle Line. Ball-shaped chandeliers illuminate Biblioteka imeni Lenina, Okhotny Ryad, etc. Bright light from ceiling cavities (coffers) fills station Elektrovozovskaya. There are many torchieres in the Moscow Metro (Semenovskaya, Novokuznetskaya, Belorusskaya of the Circle Line, etc.). Sconces look very attractive at Komsomolskaya of the Circle Line (sconces with intricate shades are fixed on the walls of the pavilion) and torch-like sconces at Oktyabrskaya of the Circle Line. Hidden illumination is also widely used in the Moscow Metro – Kropotkinskaya (in the caps of the columns) and Krasnopresnenskaya (behind the stucco cornice). Illumination of stained-glass windows is used at Novoslobodskaya and Tsvetnoy Bulvar.

Krasnogvardeyskaya



Arbatskaya of the Arbatsko-Pokrovskaya Line. Chandelier of the central hall

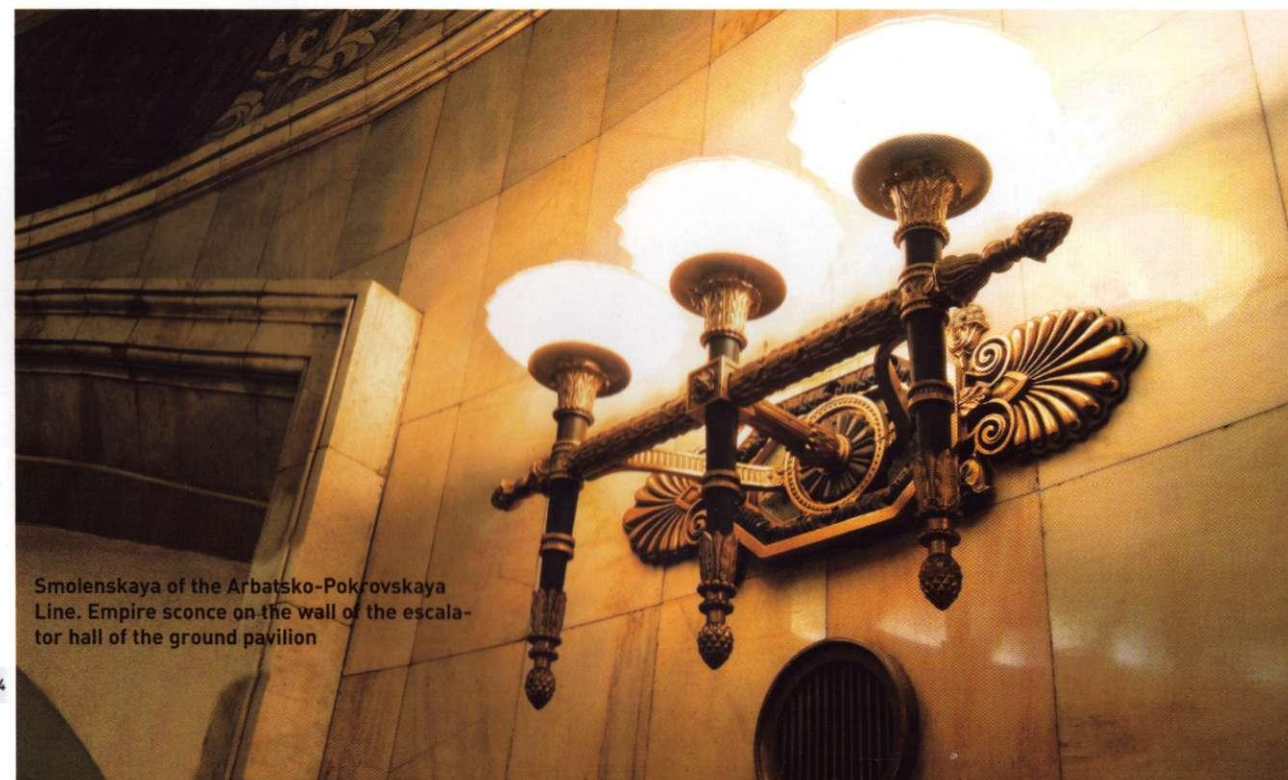
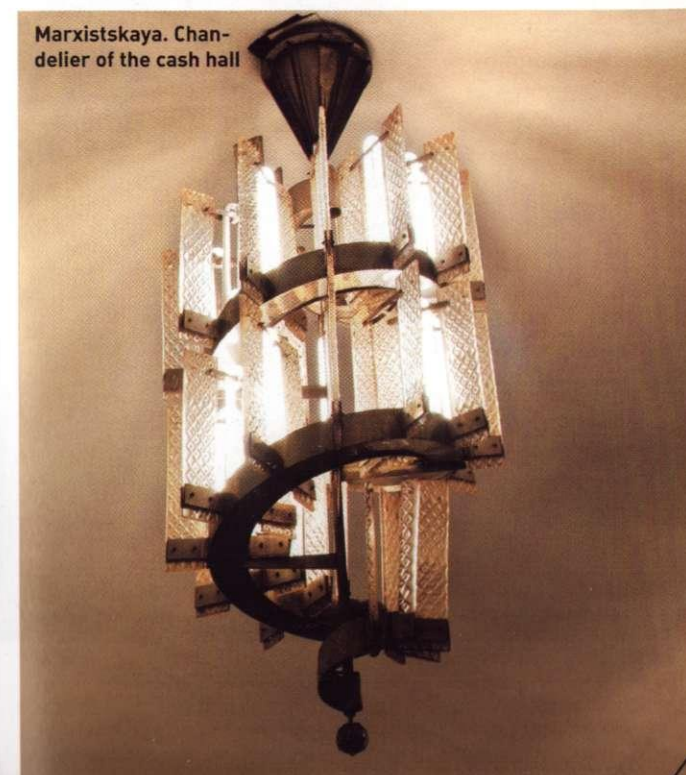


Dobryninskaya. Chandelier in the cash hall of the ground pavilion



Vorobiev Gory. Torchiere in the cash hall

Marxistskaya. Chandelier of the cash hall



Smolenskaya of the Arbatsko-Pokrovskaya Line. Empire sconce on the wall of the escalator hall of the ground pavilion



PLOSHCHAD REVOLYUTSII

Date of opening –
13th March 1938

Construction of the station –
deep, pier, three-span
Architect of the underground part – A. Dushkin
Sculptor – M. Manizer
Transition to stations Okhotny Ryad and Teatralnaya

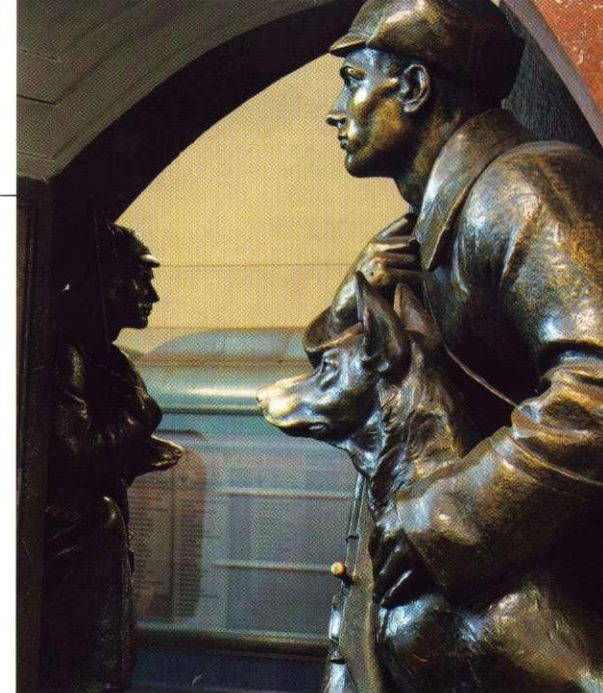
Ploshchad Revolyutsii is one of the most known and popular stations of the Moscow Metro. The idea of its architectural decoration is absolutely clear, while the form of realisation, which has been used by sculptor M. Manizer, is intelligible and understandable for everyone. He stationed a gallery of figures (personages of the revolution, civil war, and peaceful development) under ground, which illustrated the stages of the creation of the Soviet country. The statues are established on pedestals nestled into niches between the station's pylons. Each pylon has four bronze figures, which look through famous stages of the revolution – from the civil war to the peak of the Stalin era.

Now there are 76 (initially 80) bronze figures. The Manizer's gallery begins from the western end of the central hall. At the time of opening, it was the only exit while the opposite blind end was decorated with a pair bas-relief of Lenin and Stalin, which crowned «the triumphal step of the Soviet people». The bas-relief was dismantles in 1947 after the opening of the eastern overland vestibule. There are 20 unique figures in total. The gallery begins with a revolutionary worker (bow on the bosom) with a grenade and a trench soldier. In the next niche – a peasant in and revolutionary sailor with a fa-

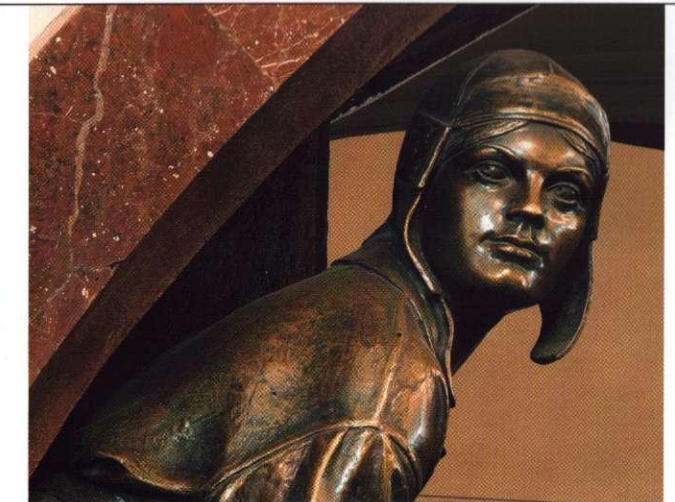
mous revolver, which is regularly stolen. Then, parachutist girl and signal sailor from Marat cruiser. In the fourth arch – a Voroshilov riflegirl with pneumatic rifle and a frontier guard with a lucky dog. If one wants to catch luck, it is needed to rub the dog's nose. In the fifth arch – Stakhanovite (rewarded Soviet worker) with air hammer and an engineer who examines a gear wheel and records something in a book. His pencil is also regularly stolen. In the sixth arch – a poultry-woman with chicken and grain-grower-machine-operator sitting on a Fordson's wheel. Then, a dreaming student boy and reading student girl. In the eighth arch – discus-thrower girl and football-player. In the ninth arch – a father with a child and mother with a child. In the tenth arch on the side of the platforms – a model aircraft constructor pioneer boys and geographer pioneer girls. All figures sit, or are on their knees, or bended for work. It was even a joke – «Here all the Soviet people sits (in Russian means be imprisoned as well) or is on its knees». The other decoration of the station serves to emphasize the figures but do not withdraw attention from them – narrow edgings of red marble along the arches of the inter-pylon passageways, black marble covered the low pedestals of the statues, grey-blue on the walls. The ceiling is a chessboard of granite plates of subdued grey and pink colours. There are very uncomfortable oak benches along the platform walls opposite the stops of first and last carriages. They are separated from each other by stone pedestals covered with black marble. There is a bronze arrow with inscription «Exit to the City» above the benches. It is one of the first direction signs in the Moscow metro.

Western ground pavilion

The hall looks rather strange. Two buildings, from which one is oval while the other is square, are connected by a passageway. The deconstructivist aesthetics of the hall has been formed occasionally. Dushkin initially projected that the oval escalator hall would be one of the internal rooms of the Academic movie theatre. According to the project, spectators appeared im-



Frontier guard with a lucky dog



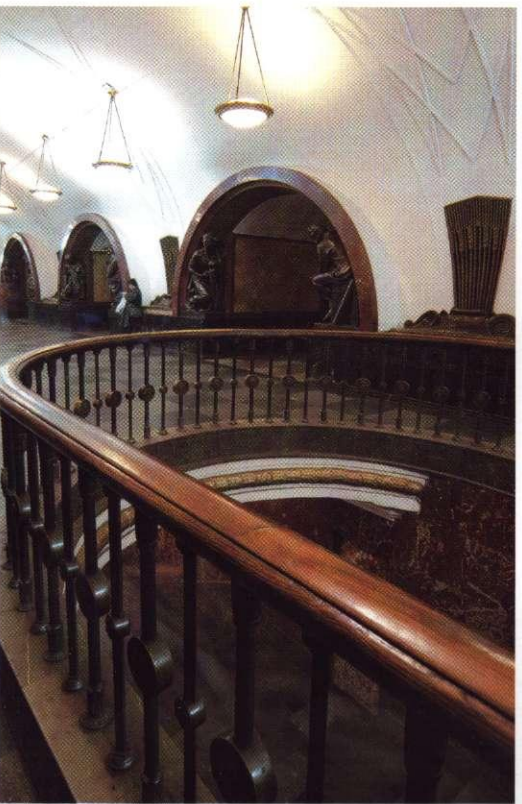
Parachutist girl

Ploshchad Revolyutsii. Manizer's gallery





Signal sailor from Marat cruiser



Transit to Station Teatralnaya

Voroshilov riflegirl



mediately from the metro to the movie theatre foyer by escalator. However the largest movie theatre in the USSR has not been built. Hence a square hall whose portal was decorated with columns was attached to the oval hall.

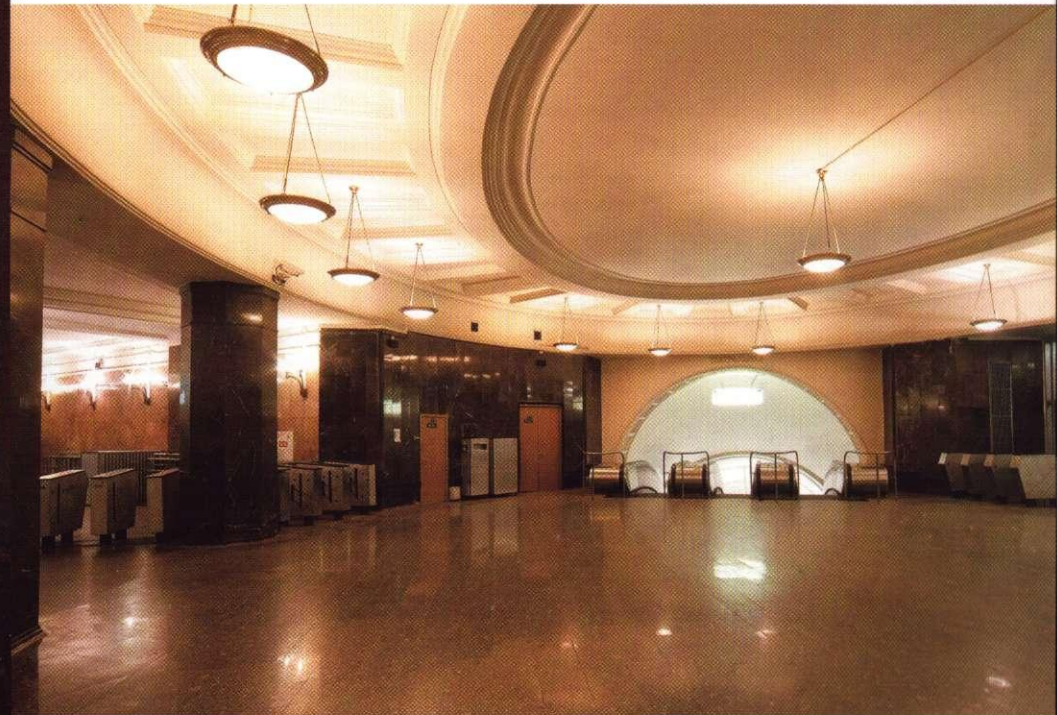
Eastern ground pavilion

The portal of the hall was built into the line of existing buildings. It consists of two (entrance and exit) low arches. Going through them, one appears in a huge two-coloured semi-circular hall faced with greyish-white marble. A striking mosaic, which consists of red flags, the coat of arms of the USSR, and years of 1917-1947, is located on the eastern wall, opposite the arch of the escalator tunnel. Words of one of the first versions of the USSR hymn are carved with gold on the right and left of the mosaic. There are oak desks under the mosaic and benches along the wall. Sitting on them, it is comfortable to observe the giant 24-branch chandelier suspended over the escalator arch and unique column-shaped torchieres of two human heights

on marble pedestals on the right and left of the escalators. The hall staggers with its barbarian pomp and overwhelms by its gigantism so much that passengers often do not notice small but very good-looking details of the decoration, e.g., an oak carved flower on the door of the office of senior cashier or intricate bronze tracery on the torchieres.

Western ground pavilion

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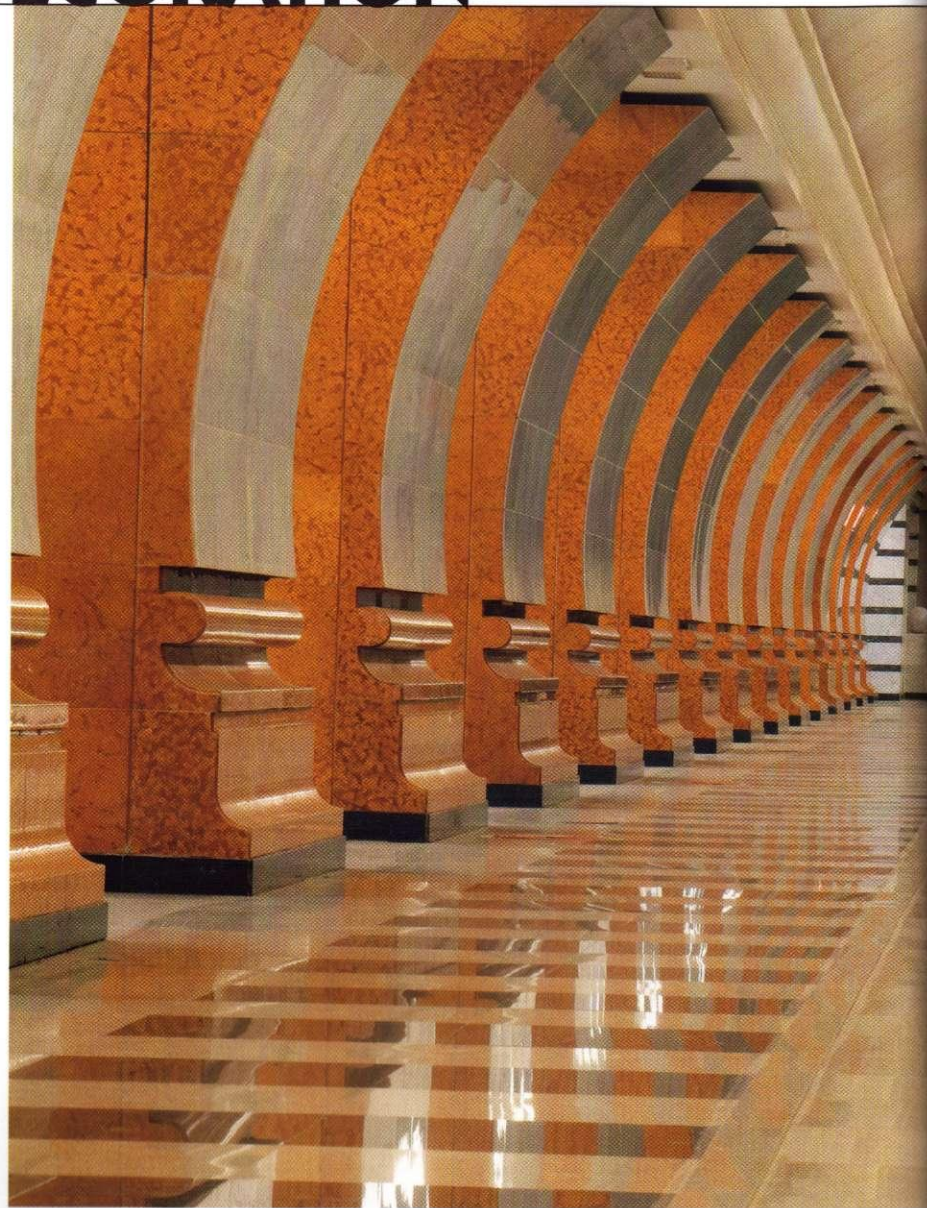


Western ground pavilion. Oval escalator hall

DECORATION

Stations, entrance halls, ground pavilions, and transit passageways of the Moscow Metro are decorated mostly with various kinds and sorts of decorative stones, such as marble, granite, calciphyry, labrador, etc. There is widely used light marble from the Koelga Deposit in Karelia (Chistye Prudy, Lubyanka, Frunzenskaya, Kurskaya of the Circle Line, Paveletskaya of the Circle Line, etc.) and from the Ufaley Deposit in the Ural (e.g., Chistye Prudy). Stations are also faced with Shoksha crimson quartzite (Baumanskaya), Biyuk-Yakoy marble of warm shades from the Crimea (Krasnoselskaya, Krasnye Vorota), breccia, or marble crumbs (Komsomolskaya of the radial line, Park Pobedy), Vyborg granite (Biblioteka imeni Lenina, walls of Lubyanka), meat-red marble with veins from the Siliyeti Deposit (Frunzenskaya) and red pattern on white, which looks like embroidery on Russian shirt (Paveletskaya of the Circle Line), Davalu black marble with white veins from Armenia (Kurskaya of the Circle Line), serpentinite of the Bazhenovskoye Deposit from the Ural (Sportivnaya), and other kinds of stone.

There are stations in the Moscow metro where metal plays a significant role in decoration. The striking example is Mayakovskaya. Various kinds of glass, gilt, and even semiprecious minerals were used for decorating the stations of the 1st-3rd phases. There are many small and mosaic panels, ceramic medallions and inserts at the stations. Chandeliers and other lamps are made of bronze, stainless steel, composite materials, and plastic.



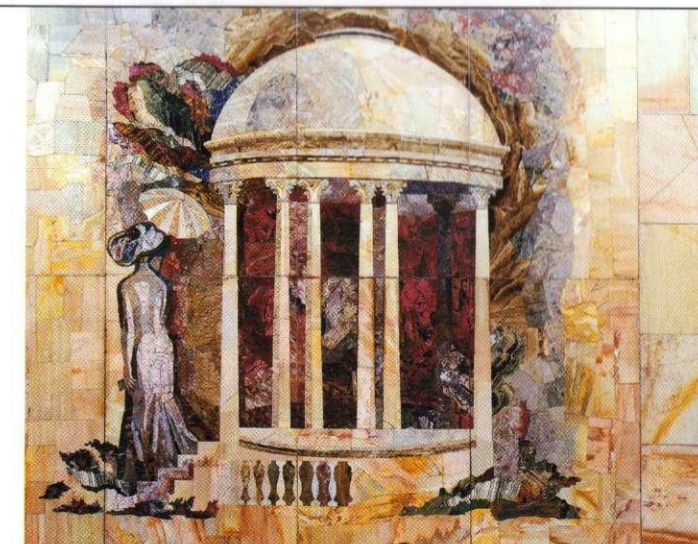
Park Pobedy. The level of polishing of decorative stones is higher than elsewhere in the Moscow Metro



Borovitskaya. Ceramic miniature in the interpylon pass showing «miracle of St. George against dragon»



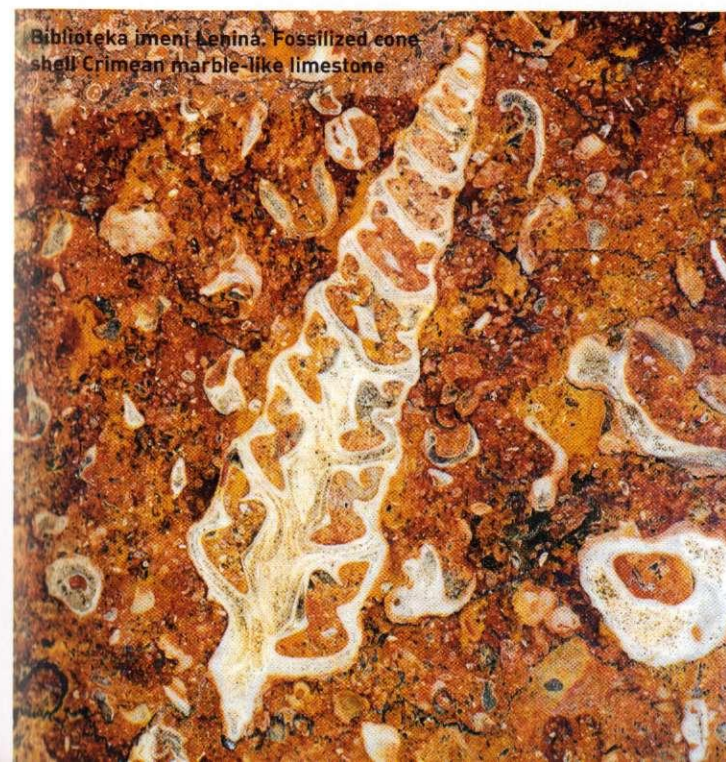
Mayakovskaya. Columns are decorated with stainless steel



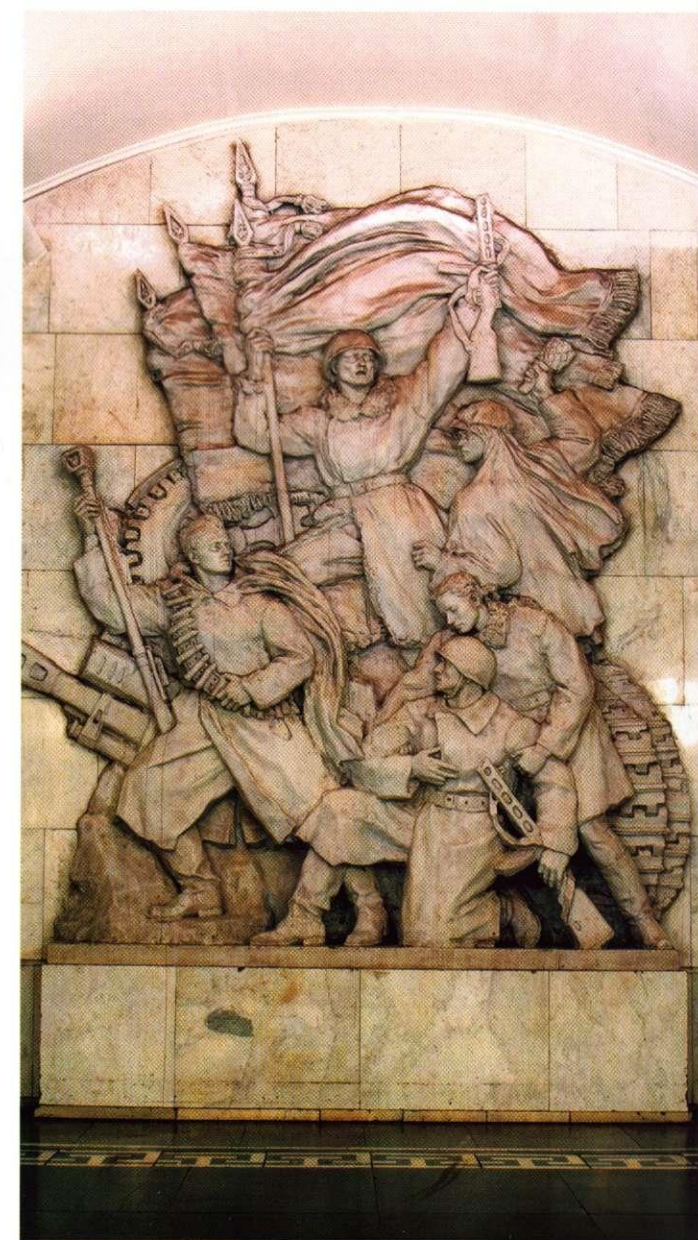
Chekhovskaya. Florentine mosaic on the wall



Oktyabrskaya of the Circle Line. Ventilation bar



Biblioteka imeni Lenina. Fossilized cone shell Crimean marble-like limestone



Smolenskaya of the Arbatsko-Pokrovskaya Line. Bas-relief «Battle»

MAYAKOVSKAYA

Date of opening –
11th September 1938,
known as Ploshchad
Mayakovskogo in the project
Construction
of the station –
deep, column, three-span
Architects of the under-
ground part –
A. Dushkin in collaboration
with engineer R. Sheifan
Grand-prix of the World In-
dustrial Exhibition of 1938
(New York)

Mayakovskaya became the second station, after Kropotkinskaya, among other outstanding projects of A. Dushkin. His wife remembers that when he projected the station in 1936-1937, he asked her to play him Bach or Prokofiev. The image of the station which he created can be named «steel». There was a lot of worry when adopting the project – new material which has been never used in the architecture frightened many. Some people said that Dushkin with all his projects and ideas was crazy. However Dushkin asked aircraft designer A. Putilov to help him persuade the heads of the metro construction enterprise to use steel for decorating the station. Light well-proportioned columns of special sorts of steel were used instead of massive heavysset pylons for the first time in the USSR. Mayakovskaya was built at very complicated hydrogeological conditions. Jurassic clay is deposited near the station with a thick quicksand nearby. While mining calottes, lan-gorines and standers crumbled

from rock pressure. When the first vaults were concreted and timbering was removed, builders found that the vaults were covered with lengthwise cracks. The fate of the station hung by a thread. One of the Commission members, foreign expert J. Morgan, definitely said that all the finished part of the chamber had to be concreted immediately. Even the idea to build a column station had to be rejected. The only way out was to get several metres deeper and build a station similar to Krasnye Vorota. However workers and engineers found the solution. The three-span ceiling was made of cast-iron tubes. The vault of the middle passenger hall was 2.5 m higher than the vaults of the tunnels. The station was built ahead of time without a single accident. Builders had also much trouble by facing the arches with wide-banded stainless steel. There was only one wide-banded shaping mill which could corrugate steel bands of required shape in the USSR at that time. It was located in the town of Direzhablestroy (now Dolgoprudny) where it was planned to manufacture non-rigid Tsiolkovsky's airships. Airship builders made steel bands of the required shape in time and assembled them on the arcades of Mayakovskaya. So 35 hip-roof sections appeared in the central hall of the station. They are divided by ribs radiating from the columns caps. The sections grow from two opposite columns. They are oval and extend crosswise the hall. The central part of each section has an additional oval deepening with a flat bottom. There are mosaic medallions de-

picting «A Day of the Soviet country» (made by V. Frolov by the cartoons of A. Deineka). They are sequenced to evoke a day. Coming from the escalator passengers see early morning, cherry-trees in blossom, and two planes in the sky. The next panel – divers plunge into water headfirst on the background of the sky. Next – ripe peaches, signalman on a ship mast and a seaplane, parachutist, and avia-parade. In this medallion the clock of the Spasskaya Tower shows noon. The morning has ended. The afternoon has started. The first afternoon panel shows a girl driving a combine harvester. Grains are in the ear. Wind blows about red flags. The second one – a pole-vaulter clearing a crossbar. Next – three gliders in the sky, four parachutists with many-coloured parachutes and a plane flying away, ski jumping, brazen reflection of sunset on pines and a flying plane, sculpture «A Girl with an Oar» in Gorky Park, a red plane in the sunset sky. Here the night starts. The first night panel shows two planes on the background on sunset clouds. Then, the planes but at night. The plane lights are switched on. Next – an airship over the Spasskaya Tower (the clock shows midnight), night parachute jump, a biplane in searchlight, two planes in false dawn. Early morning. Fuming chimneys and tail cones of chemical mills. Beyond the chimneys – a strato-plane starts, pioneers launch airmodels, three guys play volleyball, morning parachute jump, airplane flies above semicircle colonnade, a steeplejack takes load, seagulls are above a ship with a flag, a woman with an in-

fant in arms, two red airplanes, a plane above a transmission line pole, sunflowers. Two last medallions are closed now because the second exit is under construction. Going from panel to panel, plunging by perception in imaginary pictures, which, like Byzantium mosaics, pull a person out of the objective reality, a passenger seems to appear in the mysterious world. Lamps fixed by the outline of the internal ovals illuminate the mosaic medallions as well as the station itself. The steel cover of the numerous columns of Mayakovskaya nicknamed the whole station – «Mayakovsky's Steel Jacket» (analogue of the well-known jacket of the poet). The column edges are adorned up to the human height with strips of rare, good-looking, pink-purple stone with delicate silky glance – Ural rhodonite. It is a decorative stone, i.e. precious and expensive, such as jasper, onyx, agate, or amber. In some places the rhodonite of Mayakovskaya even includes precious materials. Unfortunately, nowadays most unique adornments are lost and replaced with marble of similar colours or painted gypsum patches.

The walls below are faced with red marble with intricate white impregnations. It is from the Georgian Saliety Deposit. Above the walls are decorated with grey-white-bluish Ural marble from the Ufaleyskoye Deposit. The floor of the station is covered with white, yellow, and sugar-like marble from the Uzbek Gazgan Deposit, which is famous of its abrasion resistance, with decorative inserts of pink and grey granite and narrow strips of black diabase.



Mayakovskaya. One of the mosaics of Cycle «A Day of the Soviet country»



Mayakovskaya. Central hall

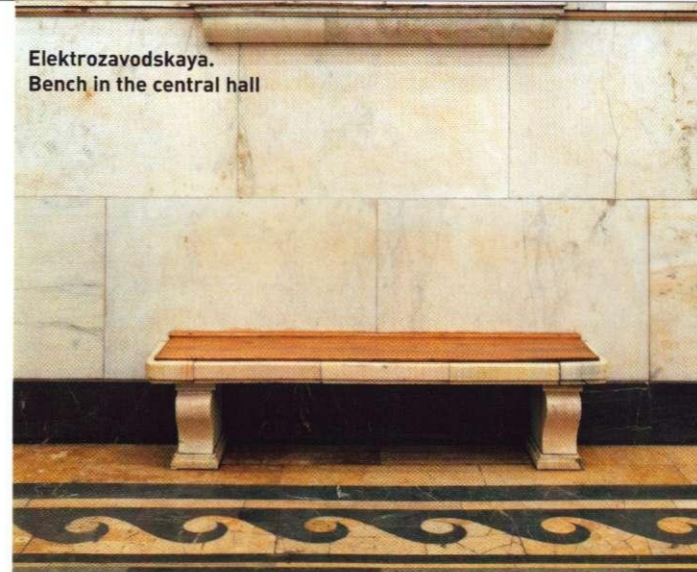
VARIOUS THINGS

Benches at the stations of the Moscow Metro should be specially noticed. Passengers tired at the end of a working day or waiting for friends are first seeking for benches. There is no better place in the metro to sit and have a rest, look through a newspaper or lecture than at station Novokuznetskaya. Then follow Frunzenskaya, Baumanskaya, Taganskaya of the Circle Line, Universitet, and others. After a passenger has relaxed, he or she may pay attention to such decoration and construction elements of a station which have not been noticed in traffic bustle. The most attractive decoration elements are mosaics (smalt or Florentine). They adorn the vaults of Komsomolskaya of the Circle Line (painter P. Korin) and Mayakovskaya (painter Deyneka), the pylons of Kievskaya of the Circle Line, the wall of Dobryninskaya of the Circle Line (panel «Morning of the Cosmic Era»), the blind wall of

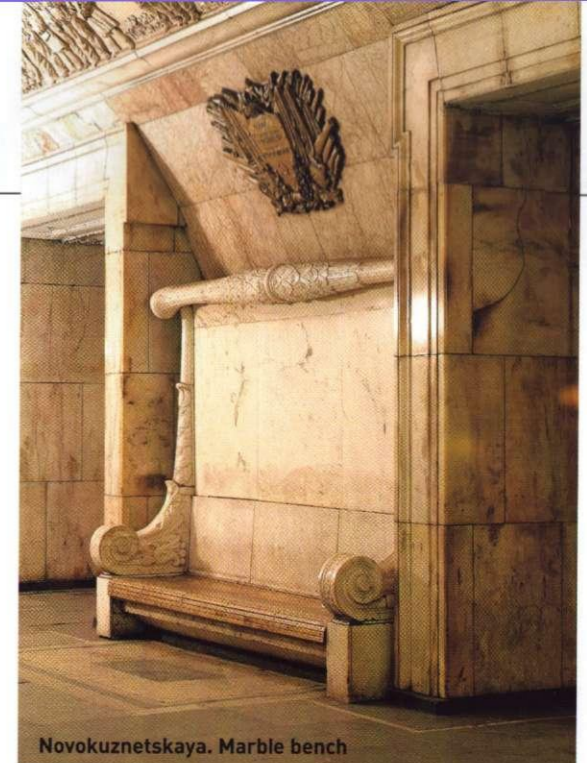
Paveletskaya of the Circle Line (panel «Male Worker and Female Collective Farmer» by P. Korin). There are many busts of well-known people in the Moscow Metro – V. Lenin (Komsomolskaya of the Circle Line), S. Kirov (Chistye Prudy), M. Frunze (Frunzenskaya), N. Bauman (Baumanskaya), V. Vernadsky (Prospekt Vernadskogo); monuments – Rebellion (Krasnopresnenskaya), Byelorussian Partisans (passageway between two stations of Belorusskaya), Metro Builders (Elektrozavodskaya); allegoric sculptures – for example an old man in a cap with ear-flaps and with a bludgeon in his hand can embody «club» of people's resistance during the Great Patriotic War. It is of great interest to observe numerous ceramic medallions devoted to sports, rest, or war – Taganskaya of the Circle Line, Dobryninskaya, Elektrozavodskaya, Dinamo, Park

Kultury, Oktyabrskaya of the Circle Line. The city administration of Lisbon presented Moscow with majolica panel «Faces of the World» (artist Viva Morais) on its 850th anniversary. It is placed at Belorusskaya of the Circle Line. The illusion of widening space and perspective is created by false windows in station vaults or transit passageways (vault mosaics at Mayakovskaya, panel «Salute of Victory» in the transit passageway of Taganskaya of the Circle Line) and false arches (Oktyabrskaya of the Circle Line). There are even fountains in the Moscow Metro (Rimskaya, Borovitskaya, pavilion of Belorusskaya of the Circle Line). They are also designed to make feeling that a passenger is not underground but outdoor, in a light wide Moscow street. Those who are interested in the Moscow Metro may visit People's Museum of the Moscow Metro, which is located in the southern ground pavilion of station Sportivnaya.

Elektrozavodskaya. Bench in the central hall



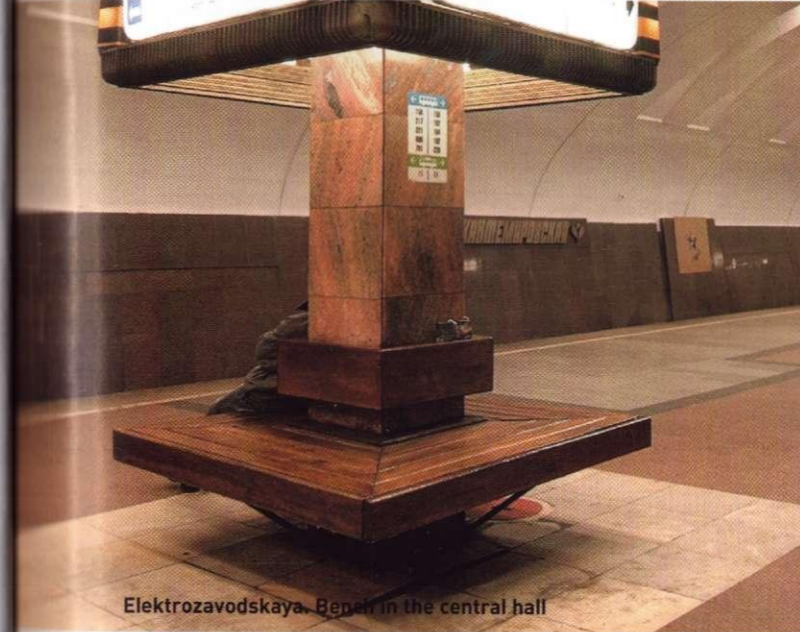
Novokuznetskaya. Marble bench



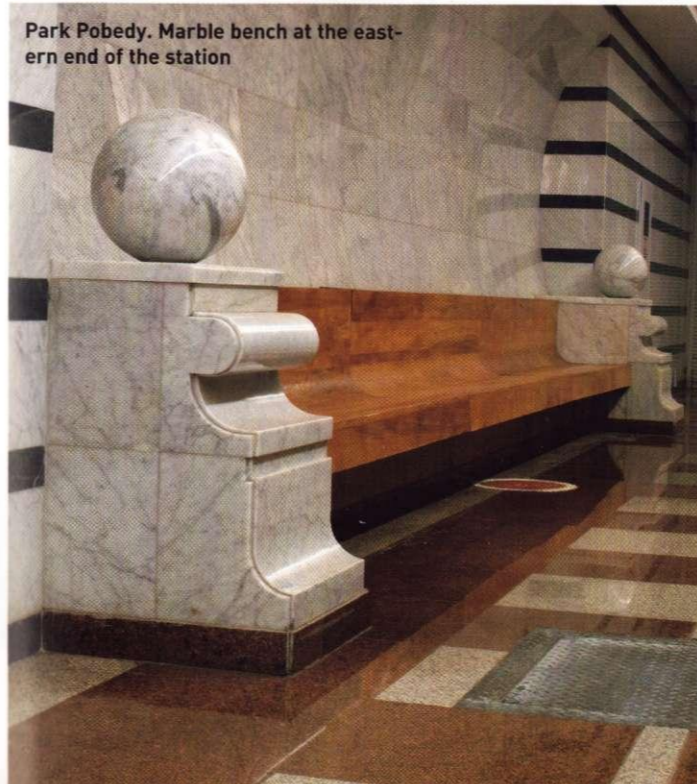
Arbatskaya of the Arbatsko-Pokrovskaya Line. Benches in the central hall



Elektrozavodskaya. Bench in the central hall



Park Pobedy. Marble bench at the eastern end of the station



Aeroport. Bench in the central hall



PARK POBEDY

Date of opening –

6th May 2003

Construction of the station –

deep, pier, three-span

Architects of the underground part –

N. Shurygina and N. Shumakov

Park Pobedy was opened on May 6, Day of George the Victorious, patron saint of the Russian host. It is the 165th station of the Moscow Metro – first of the new, already the sixth or seventh, generation of stations. It includes a great number of design, engineering, and technical innovations along with architectural novelty and freshness. It was constructed with modern tunnel machinery. As a result, an enormous complex of two stations and two underground pavilions was constructed. The stations are parallel and lie at the same level, 64 m deep. Trains of Arbatsko-Pokrovskaya Line arrive to station 1 but depart from station 2. The station halls are elegant, refined, and simple. Compact, upper opening pylons are separated by wider passageways. There is a wide cornice, hiding lamps, over the pylons along the whole station. There are additional ceiling square lamps on the lower part of the cornice, which reflect (when switched on) in the smooth surface of the floor. The level of polishing of decorative stones is higher than elsewhere in the Moscow Metro.

The pylons and walls of station 2 are faced with light marble, ranging from white to bluish-grey. The walls of the passageways and plinths are with unique

marble breccia, from yellow-orange to red with very good-looking combination of fragments of different shapes, sizes, and backgrounds. The ceiling is covered with the same smoothly polished plates of red and light-grey granite. Station 1 is the mirror image of station 2. White is replaced by yellow-orange and vice versa. The ceilings are chessboards of black gabbro and light-grey marble. The stations are thematic – the second one is devoted to the Patriotic War of 1812 and the first one is to the Great Patriotic War of 1941-45. The themes are manifested with great striking panels. The panel of station 2 is in the eastern end, while the panel of station 1 is in the western end. They are the unique works in the Moscow Metro. They are unique in technique (colour enamel on metal) and style. The author of both panels is Z. Tsereteli.

The theme of the western panel is Victory in 1945. It shows the monument of a liberator-soldier in the Treptov Park on the background of the Kremlin. A triumphant throng is around. Order of Victory is above and the ribbon of Guard is below. Very interesting is the effect inherent only in the technique of enamel. White colour appears very bright. So, the first thing that one sees looking at the panel is white eyes and teeth in slightly opened mouths. The theme of the eastern panel is Victory in 1812. It shows top officers of the Russian army, which was victorious over Napoleon – M. Kutuzov surrounded by major associates. It is neither the meeting in Fili (no Bagration) nor the meeting after occupation of Paris (no the Emperor). It could be the meeting before the Borodino Battle but

the generals trample on thrown French standards. It seems the painter has pictured a summoning of the saint army of Christ in the heavens. There are massive benches of marble with large marble balls on the arms located on a small pedestal along the walls.

The stations are connected by bridges through the wall between them. The passageways are also faced with very good-looking marble breccia of pastel colours, ranging from cream-coloured to soft pink. The stations are connected with the ground by the longest escalators in Moscow (126 m, 740 steps), which end in the two-level underground hall.

Vestibule of Park Pobedy

This vestibule is an original underground architectural ensemble consisted of three halls. There are wide doors decorated with a granite panel with metal letters «Park Pobedy» on the side at the corner of the L-type underpass crossing Kutuzovskiy Prospekt and Ulitsa Barklaya. Behind the doors, there is a wide passageway of white marble, which is cut by the long axis with square columns. The passageway leads to the ticket hall – a rectangular low hall. Behind the turnstiles, a staircase goes down turning twice at right angles and three short escalators end. The staircase leads to the greater escalator hall whose ceiling is supported by columns faced with orange marble breccia. Their cup-shaped metallic caps hide lamps. The vestibule is illuminated with five very large and deep coffers made in the suspension ceiling. The walls are faced with orange marble with an edging of white marble above.



Park Pobedy. Underground entrance hall

Park Pobedy. Arch of the escalator tunnel





Park Pobedy. Panel at the blind end of station 1



Park Pobedy. Name of the station on the wall



Park Pobedy. Panel at the blind end of station 2



Park Pobedy. Central hall of station 2



Park Pobedy. Pylons of the central hall of station 1

CARRIAGES

For a long time engineers tried to design a carriage using a standard engine of suburban electric trains. However a carriage with such engine did not go in the tunnel. That was also a reason to reduce the size of a carriage. Finally engineers succeeded in constructing a compact engine of direct current. The lounge was designed based on carriages used the undergrounds of Berlin and New York – 8-door carriage with lengthwise seats along the walls. Passengers in such carriage look at each other. American Westinghouse's electric circuit was used.

As the width of the track met the railway standard, it was decided to place a carriage on two two-axle rail cars and use the standard coupling. The size of a carriage was reduced – 19.2 m long, 2.67 m wide and 2.1 m high. Based on this size the Mytishchi Plant manufactured a simple wooden carriage on a metallic frame. At the same time, L. Teplitsky (architect the Moscow Metro Building Enterprise) designed his own version of the carriage with the rounded front part and leather seats, which looked like carriages in the London and Berlin underground. The choice was a charge of the Communist Party leaders. One said that N. Khrushchev compared the Mytishchi carriage with a carriage of the IV class of Tsar Russia. So Teplitsky's carriage was adopted. Carriages of Series A were manufactured by the Mytishchi Machine-Building Plant (mechanical part), Dinamo Plant (engines and electric circuit), and Moscow Brake Plant in 1934-1938. The carriage was tested at the Dinamo Plant where a trial circle track of 800 m long was made. Each track

was designed for 35 seats and about 100 standing persons. The doors were pneumatic, sliding, and automatic already at that time. The doors below had figured cuts in the form of human foot covered with rubber to save feet of passengers. One said it was the idea of L. Kaganovich. The practice showed that it was needless.

The ventilation in carriages was natural – in motion, through air intakes in the roof. The colour was complex – dark red of the lower part and yellow of the upper part. A train section consisted of a motor carriage (A01) and a trailer (A02). Sections form a train – first from two sections, then three. A motor carriage had a cabin for an engineer. Each axle had an electric engine. A trailer was equipped only with an electric grid. The brake system was mechanical, one per section. A train brigade consisted of three persons – a chief and an engineer in the cabin and a guard in the last carriage who signalled to the engineer with a special two-coloured ring that the train is ready to depart. The control of first trains was similar to trams – rheostat for regulating current strength, break lever, pneumatic cock for doors control. An unusual device of that time was so called «dead man switch». An engineer kept it pressed continuously. If not, the power turned off. It was made to ensure the safety of passengers in case of engineer's death, faint, or sleep. Such buttons were not installed in the next modification of a carriage. Special compartments were fenced with hand-rails near cabins for young mothers. They had a special entrance. The chief of a train controlled the proper use of the compartment.

Carriages of Series B were manufactured by the Mytishchi Plant in 1938-1940. These carriages were modifications of Series A with new electric circuit, brake system, and some details of decoration.

The own design of the Mytishchi Plant was carriages of Series G (1940-1941 and 1947-1955). There were only motor carriages with a cabin in each carriage. The carriages have a brand new (electric) brake system. Now an engine when breaking worked as a generator giving electric power back to the grid.

When the war began, the manufacture of carriages was stopped. Those who were evacuated from Moscow said that they saw metro carriages of Series A and B in evacuation trains. Their word were confirmed by Soviet writer K. Simonov. However it is impossible to imagine how people could travel in metro carriages during Russian winter. The manufacture of carriages of Series G resumed in 1947.

After the war, the Moscow Metro received 150 carriages of the Berlin underground as reparation. In Moscow they were marked V-1, V-2, and V-3. German carriages were replaced from European cars (1435 mm wide) to Soviet cars (1520 mm wide). They were in operation till the middle of the 1970's. With time 4-carriage trains were replaced by trains with 6, 7, and at last 8 carriages. The number of passengers increased from 400-450 persons to 850-900 persons. Captured carriages became the first carriages of the Moscow Metro painted blue.

Carriages of Series D (1955-1962) had electric equipment and exploitation characteristics similar to Series G, but carriages of Series D were 20% lighter – 36

tons instead of 44 tons.

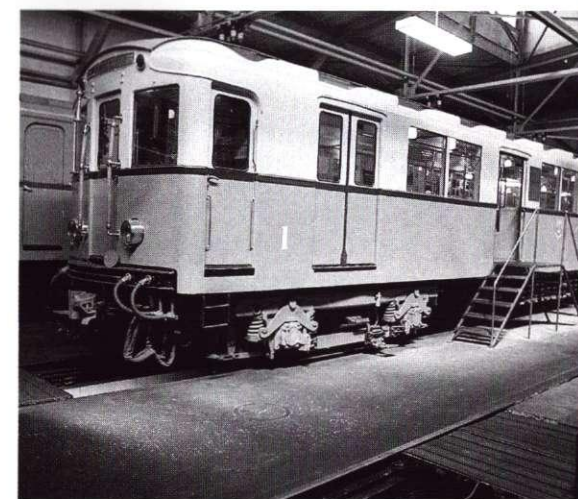
The basic model of Series E was a modification of Series D in 1962. Daylight lamps and plastic facing of the walls were first used in this series.

Carriages of Types 81-717 and 81-714 (since 1978) are now mainly used in the Moscow Metro. Both carriage 81-717 and carriage 81-714 have engines. Carriage 717 has a control cabin. These carriages are more fire-resistant than the previous ones, lighter, more efficient, with better starting, easier in control. A new electronic control system was used in them, so an engineer does not need an assistant more.

Carriages of Types 81-720 and 81-721 «Yauza» were designed in cooperation with designers – streamlined shape of a glassed cabin, curved side walls. The body of «Yauza» was completely made of stainless steel. The natural ventilation system was replaced by forced ventilation. Facing was made only of non-inflammable materials. Electronic indicator panels were installed

above the doors. «Yauza» is the first carriage since 1953 where next station is not announced by radio. Trains of such carriages are in operation only in the Lyublinskaya Line.

Carriages of Types 81-740 and 81-741 are a pair of motor carriages – one with a control cabin, the other without it. Carriages are linked with moving coupling similar to that of busses. A train is formed of two or three such modules. There is a conditioner in a carriage to keep comfortable temperature, so they can be used in open line. They are equipped with electronic indicator panels and cameras which display an image on a control panel instead of driving mirrors. Such carriages are used in the Butovskaya Line of light metro. Carriages of Type «MMTS» are used in the Moscow Monorail Transport System, which is a new kind of public transport in Moscow. The monorail system is organizationally subordinate to the Moscow Metro but it is neither technically nor constructionally connected with it.



Carriage of Type A



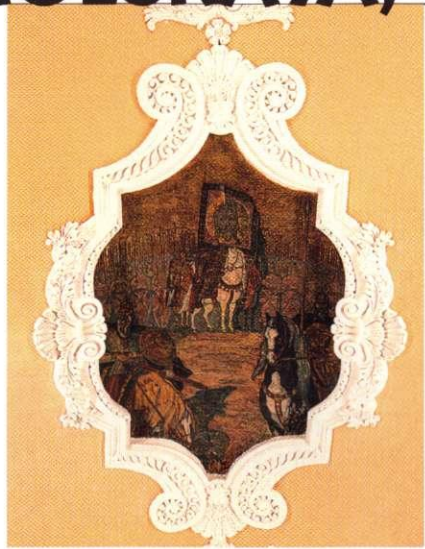
Carriage section of MMTS



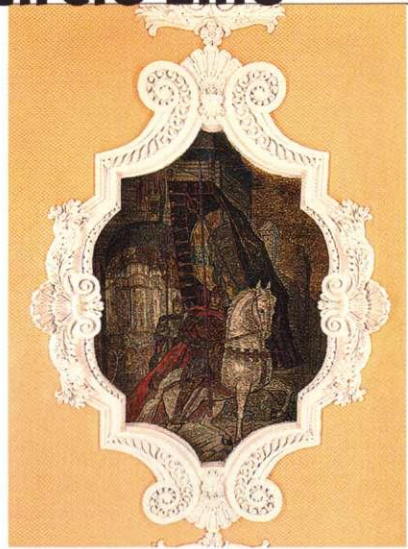


KOMSOMOLSKAYA, Circle Line

Date of opening –
30th January 1951
Construction of the station –
deep, pier, three-span
Architect of the underground part –
A. Shchusev (died 1949), co-authors of the project – V. Kokorin and A. Zabolotskaya
Transition to Komsomolskaya of the Sokolnicheskaya Line

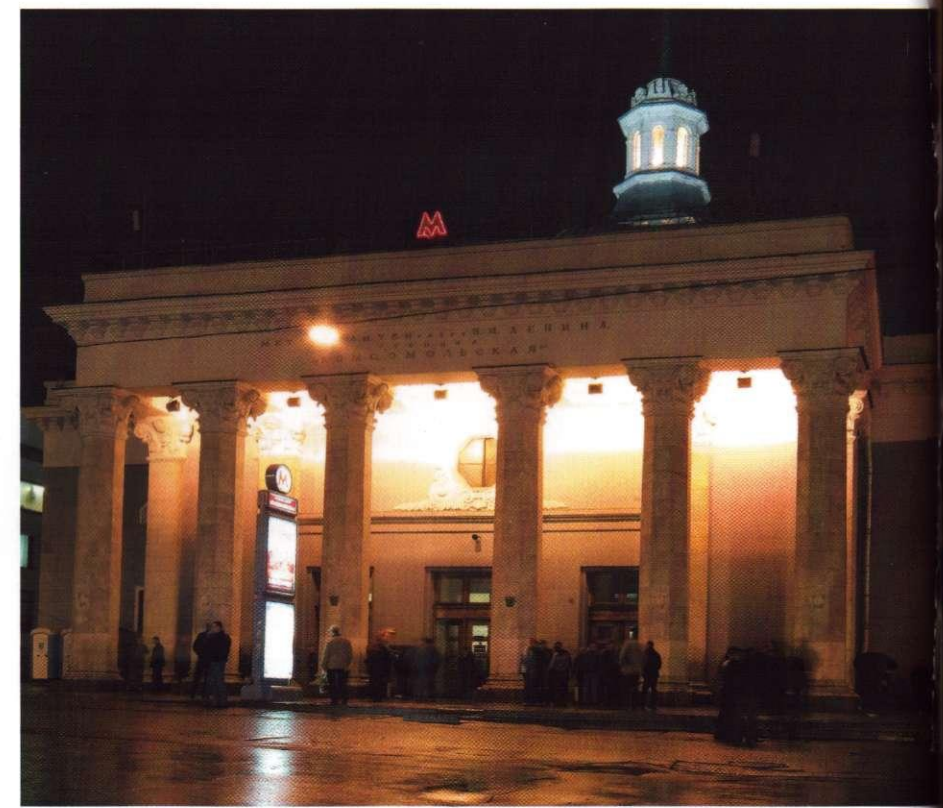


Komsomolskaya of the Circle Line. Mosaic «Dmitry Donskoy»



Komsomolskaya of the Circle Line. Mosaic «Prince Alexander Yaroslavich»

Komsomolskaya is a peak of the great Stalin emperor style characterised by mightiness, pomposity, combination of classicism, Empire style, and Moscow baroque. Painter P. Korin, an equal co-author of the architect, in this case, contributed much to the creation of the station. Komsomolskaya cardinally differs from other stations of the Circle Line. Instead of usual massive pylons, there at a greater depth, at complicated geological conditions, an original load-carrying structure was used, absolutely new for that time. There are arcades – 34 columns on each side – linked by elegant arches. They carry the common entablature with a cornice stretching throughout the station. The entablature carries the basements of the vaults of the central hall and two track tunnels. The vault of the central hall is half as much high as the side halls. All this, simplicity and height, creates the feeling of open space, which extends by the rhythmic step of the arches running to perspective. The station is light, elegant, and harmonic. The decoration of the station is concentrated on its main vault. The vaults of the track tunnels are simply white, winding with



Komsomolskaya of the Circle Line. Ground pavilion

narrow transversal belts slightly in relief. There are eight small mosaics along the main axis of the central hall and 16 more golden mosaics in pseudo-pendentives highlighted with mouldings. The mosaic panels are located in a chronological order starting from the blind end of Komsomolskaya. The end wall of the station carries a mosaic coat of arms of the USSR, gold on the

claret-coloured background rounded with florid ornament. A small marble bust of V. Lenin is beneath the coat of arms. The first panel is devoted to the victory of Prince Alexandre Yaroslavich in the Battle on the Neva. The Prince holds a banner in his hands with half-covered Christ's face on it. On the pendentives – criss-cross swords, pole-axes, and quivers on the background of the coat of arms



Komsomolskaya of the Circle Line. Mosaic on the vault of the dome hall



with George the Victorious. The second panel shows Dmitiy Don-skiy before the Kulikovskaya Battle. The Prince holds a banner in his hands with Christ's face. Peresvet and Oslabya on horseback are in front. The third panel shows Prince Pozharsky and citizen Minin summoning people's army in the Red Square. The Cathedral of the Cover is on the background. On the pendentives – criss-cross unicorn guns, sabres, pikes, and bayonets on the background of cuirass and shako with double-headed eagle. The fourth panel shows Suvorov in The Alps. His marvellous heroes are in front. The fifth panel shows Kutuzov in the Borodino Field. There are Orthodox crosses on banners. On the pendentives – criss-cross sickle, hammer, and sub-machine guns on the background of Order of Victory. The sixth panel shows Lenin speaking at the parade of the Red Army before their journey to battle against Kolchak's. The seventh panel show the capture of Berlin. Soldiers carry a banner with Lenin's face. The eighth panel shows the Victory Parade in Moscow. A barefooted lady with an olive branch in her left hand and sickle and hammer in her right hand tramples on fascist banners thrown to the basement of the mausoleum. All the panels are set off with wide mouldings inspired by Russian mansion «grass» painting. The similar moulding forms separate geometrical shapes, such as belts, frames, and edgings. There is a staircase at the end opposite to the blind end, which leads to a cupola hall. The vault is adorned with a red star with golden rays and 16-branch circle chandelier. A short passageway whose walls are decorated with meat-red marble leads to an escalator to the ground hall.

Komsomolskaya of the Circle Line. Central hall





KOMSOMOLSKAYA, radial

Kalanchevskaya –
when put into service

Date of opening –
15th May 1935

**Construction
of the station –**
shallow, column, three-span

**Architect of the under-
ground part –** D. Chechulin

**Transition to Komsomol-
skaya of the Circle Line**

Komsomolskaya is the key station of the first phase. Its construction began in May 1933. The station was constructed by open-cut technology midst of an intensive transport junction at complicated hydrogeological conditions. When the construction of the trench began, it was found that there was too much water in local sand. Ground actually flew down from spades and excavator buckets. The task bore a strong resemblance to an attempt to scoop out sea. Then, metal beams were hammered in right up against each other along the perimeter of the future trench, so formed underground piling hardly permeable for water. Then, two deep and long transverse trenches were made near the both ends of the future station. Hence a huge trough was made. The bottom was Jurassic clay, while the walls were metal beams. The quicksand appeared as being entrapped and began to give water back. Some weeks later the construction of the main trench began. Winter made the construction quicker. Water drained from the bottom while froze from above. Builders took out 1200 cubic metres of ground from the trench every day and removed by lorries and cargo trams. The first train ran from Sokolniki to Komsomolskaya in October 1934, or 18 months af-

ter the construction began. The quicksand-control technology is not the only innovation used for the construction of Komsomolskaya. Earlier sleepers in the underground were put on a ballast layer of crushed stones, which holds them. This solution has lots of pluses, but crushed stones accumulate dirt, dust, and garbage, which can be removed only by replacing the whole ballast layer. Dirt in a front palace station? It is absolutely inadmissible. During a week, ordinary builders developed, made agree, and tested the method of putting sleepers into specially made concrete from which they can be removed and replaced. Such concrete was called truck one. Nowadays sleepers at all stations are put into concrete truck while a ballast layer is used in tunnels. Komsomolskaya was designed based on the calculation of maximum traffic. Its main characteristic features are side galleries above the platforms at a height of more than 4 m. They connect entrance halls at the ends of the station while a bridge connects them at the centre from where staircases run to the lower level of the platform. The architect succeeded building two-storeyed construction convenient for passengers and keep the vast unencumbered interior. Such project has been unique for the Moscow metro for near 70 years. Despite the size, Komsomolskaya is simple, light, and elegant as all other stations of the first phase. Square columns, decorative columns of the galleries, and walls of the entrance halls are faced with Crimean marble from the Chergun deposit. It is peculiar stone with all shades of yellow and light brown. Here is amber, honey, baked milk, and fumed wood. Its structure is stratifies, or rolling, or fluid,



Komsomolskaya of the radial line.
Central hall

breccia-like. The caps of support columns are decorated with relief bronze-coloured crowns with five-pointed stars with Russian letters «КИМ» inside. It is the emblem of the Communist International of Youth whose part was Russian Communist Union of Youth (briefly Komsomol in Russian). In the gratitude for exhausting labour of many thousands of members of Komsomol who built the underground in 1933, Kalanchevskaya Ploshchad was renamed into Komsomolskaya Ploshchad. The station also was renamed into Komsomolskaya, and the emblems of Komsomol

adorned the caps of the columns.

A staircase from the lower level of the southern end of the station runs to the southern entrance hall located at the level of galleries. The similar entrance hall is at the opposite, northern end of the station. From there the passageway divided with facet columns leads to four short escalators, which connect the station with the northern ground pavilion.

The side concave wall of the northern entrance hall, on the right and left sides of the passageway, is decorated with a

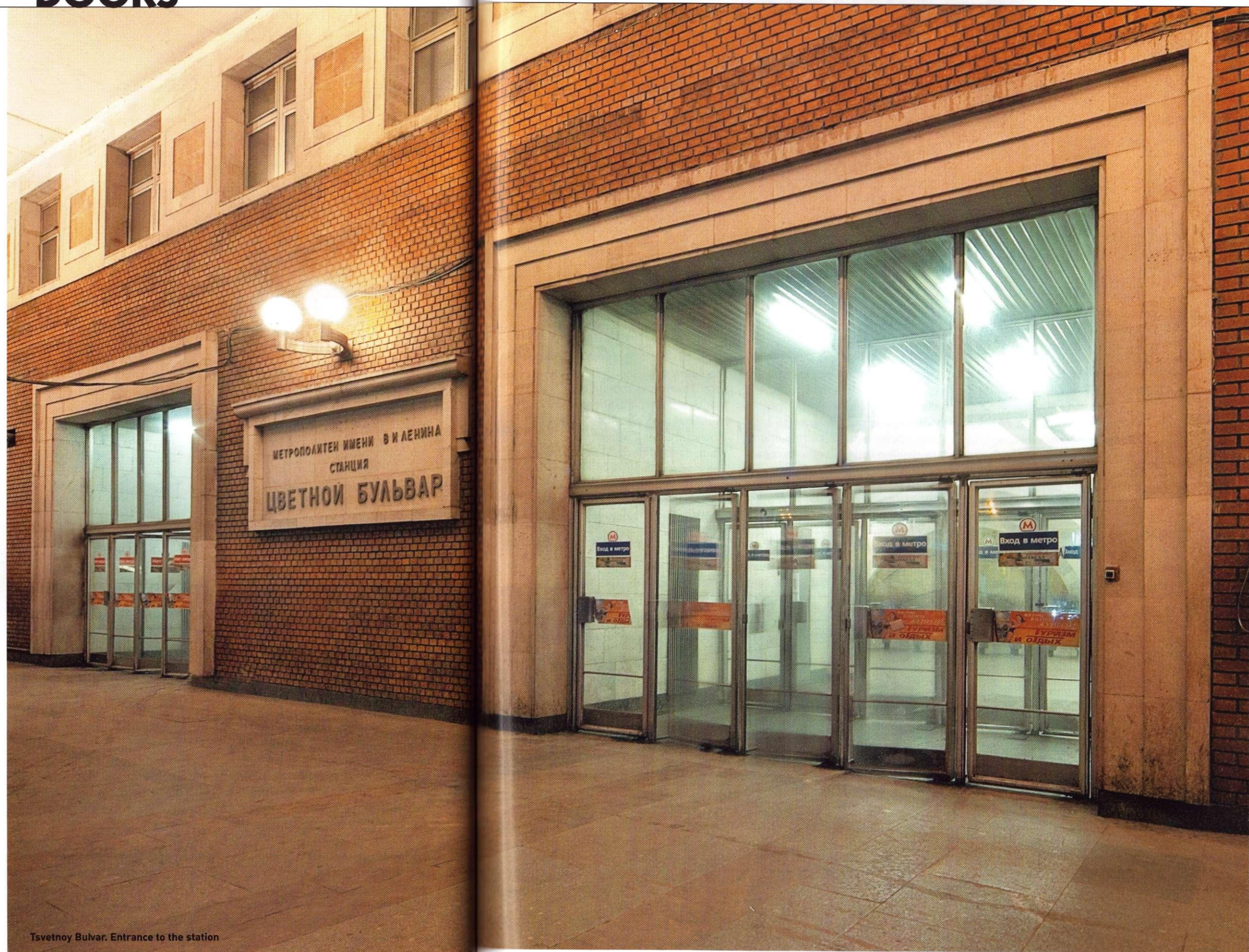
coloured majolica panel «Construction of mine of the underground» (E. Lansere). It shows sketches of the metro building in a chronological order. On the right side, tunnellers crush stones with air hammer and remove it with cars from the pit. On the left side, other people lay tracks and electrical cables, paint and face the station. The colour of the panel ranges from dark brown, nearly black, on the right side through ochre, blue, and yellow to pink on the left side. The faces of all the persons are different. This indicates that they are portraits of first metro

builders. It is an interesting fact that most persons are pictured in profile, and some those en face are with eyes dropped. They either write something in notebooks or look at ground. Only two open bright looks are there. A girl on the right side of the panel looks at onlooker and invites them with her hand – «Come here to the pit. Let's build metro together». The blue eyes of her girl friend on the left side of the panel are not less inviting but with reproach – «Look at me. We already built this station, I'm alone here, but you haven't come».



DOORS

Entrance/exit to the metro is designed to separate incoming and outgoing passengers. So two sets of doors are designed at all the stations – one for entrance, the other for exit. Doors in the Moscow Metro are either wooden (mostly oak- en) with glass in it or glass in an aluminium frame. The latter doors leading to pedestrian subways and stations are sometimes dismantled for summer- time. Each door has information on it – «Entrance» on the exterior side of entrance doors and «No Exit» inside, «No Entrance» on the exterior side of exit doors and «Exit» inside. Nowadays the information is written on a self- gumming film. Earlier it was simply stencilled. A part of doors (entrance and exit) are always closed. So passenger flows in rush- hours are regulated. Some ground pavilions have decorative doors (Elektrozavodskaya). The space above doors is often adorned with large bas- reliefs (Baumanskaya, Park Kultury of the Circle Line). There is always windy in entrance halls of the metro – ventilators operate, trains push air in tunnels. Hence there is heavy draught and, if a person before you does not hold a door back, you may get hard blow. When opening a door, a passenger has to fight with wind and it is more difficult to push a door toward wind. So it is easier to pull a door but in this case you may get blow in the back.



Tsvetnoy Bulvar. Entrance to the station

STATION

Arbatskaya, Arbatsko-Pokrovskaya Line

Date of opening –
5th March 1953

Construction
of the station –
deep, pier, three-span

Architects
of the underground part –

L. Polyakov, V. Pelevin,
Yu. Zenkevich, A. Rogachev
and M. Engelke

Transition to stations
Borovitskaya, Biblioteka
imeni Lenina and Alexan-
drovsky Sad

Arbatskaya is one of the largest stations of the Moscow Metro. It is 220 m long with passageways to escalators. Only station Vorobiev Gory is longer.

It has a specific architecture with pylons gradually widening upwards forming common parabolic vaults in the central hall and

both track tunnels. This masks the closure of the volume typical of pylon stations. Moreover, the huge size of the central hall creates the feeling of simplicity and running perspective. Arbatskaya has many constructive features similar to Ploshchad Revolutsii. It is also decorated with plastered surfaces (Attention! Do not lean against the walls when waiting for a train.) and low pedestals are faced with red marble. However when a train arrives at Arbatskaya from Ploshchad Revolutsii, a passenger seems to appear at the Age of Baroque from the Middle Ages. The bright white vaults, pylons, tunnel walls and ceilings of passageways and both entrance halls are adorned with alabaster mouldings as garlands, bouquets, clusters, aiguillettes, and tassels. The tunnel walls are covered with ceramic tiles, light lemon-coloured above and black at the bottom. The walls of the passageways and entrance halls are decorated with greyish-white marble above and red marble at the bottom. The station is illuminated with intricate baroque-like

lamps in gilded bronze settings – two line of pendant chandeliers and sconces. A bench for three persons is near each pylon. The exit to the city and transit to stations Aleksandrovsy sad and Biblioteka imeni Lenina begin with an escalator at the eastern end of the station, which leads to the intermediate hall. A huge 26-branch circle chandelier is attached by chains to the ceiling. The other exit to the western ground hall leads to the western end of Arbatskaya. The long escalator runs to the rectangular hall. There is a huge vertical panel – white on the white wall rounded with baguette-like moulding opposite the escalators. There was a main full-length portrait of Generalissimus Stalin with all his regalia. Nowadays it is covered with whitewashed decorative plates. The portrait was the only element of the station's decorations which somehow reminded about the War. Such «non-warlike character» distinguishes Arbatskaya from most other stations of the late 1940's – early 1950's.



Biblioteka imeni Lenina. Central hall

Biblioteka imeni Lenina

Date of opening –
15th May 1935

Construction of the
station – arched, shallow

Architects of the under-
ground part –
A. Gontskevich and S. Suslin

Transition to stations
Arbatskaya of the
Arbatsko-Pokrovskaya Line
and Alexandrovsky Sad

Biblioteka imeni Lenina is the first single-span arched station of the Moscow Metro. Such construction creates not the illusion of open space and height but real open space and height. So, there is a huge unencumbered and undivided space appeared under ground.

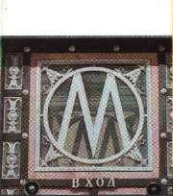
The platform of the station under such vault seems narrow, so it becomes slightly uncomfortable when crowded. The decoration is utterly concise. The walls are faced with

light beige small ceramic tiles. The wide pilasters which decorate carrying belt (line where the vault arches support on the walls) are with dark fancy marble. Long rectangular panels of the same marble are on the walls. They carried the schemes of until there was enough room. There are lines of coffers with stepped edges on the vault of the station. The matted semi-spheres of chandeliers are built in the vault and placed by transverse lines while white spheres were suspended by two lines on the right and left sides from the central axis of the station. The ceiling is decorated with pink-grey plates of large-crystalline granite from the Vyborg area of the Karelian Isthmus. The platform is rounded by narrow edging of dark grey diabase. The famous «library bridge» is located approximately in the middle of the platform. It opens the exit to the city and transit to stations Arbatskaya and Aleksandrovsy sad, but its main function – a place of meeting. It is customary to make an appointment «under the bridge». When the station is crowded, as

soon as one goes under the bridge one appears as in a house. There is dark and quiet. You may read, have a seat on a container for bombs, replace purchases from one bag to another, or try on new dress. The northern and southern ends of the station have stairways. Going up by the northern stairway, one appears in a quite large cubic entrance hall with balconies above the track tunnels. The blind wall of the hall is adorned with a mosaic (Florentine mosaic of various facing stones) portrait of V. Lenin. Lenin looks at a broad passageway divided by columns and high forged grille along the axis, which separates people coming from the opposite directions. The passageway ends at the escalators of Arbatskaya. If going by the left part of the passageway, there is an exit from station Aleksandrovsy Sad and, then, the passageway from the library bridge. The stairway at the southern end of the station goes up to a broad passageway whose wall is decorated with a small majolica portrait of V. Lenin.

Arbatskaya of the Arbatsko-Pokrovskaya Line. Central hall

Arbatskaya of the Arbatsko-Pokrovskaya Line. Escalator hall



Aeroporto. View to the platform from the hall at the southern end of the station



Aeroporto. Entrance to the station



Aeroporto. Ceiling of the northern entrance hall

Aeroporto

Date of opening –
11th September 1938

Construction of the station –
shallow, arched

Architects of the underground part –
B. Velensky and V. Ershov

Aeroporto is the first station of the Moscow Metro built by the open-cut technology. The feeling of open space, lightness, airiness, which occur to passengers, is intensified with a simple architectural technique – all the elements of the station, from the vault of the central hall to the ceilings of the entrance halls and even ticket windows, are decorated with long narrow strips. They run through the whole surface intersecting each

other. So passengers have the feeling of impetuous flying and network of inversion tracks in the cloudless sky over the airport. It is quite interested because airplanes of the period of Aeroporto construction did not leave tracks.

The walls below are decorated with black diabase. The rising sun made of cream-coloured marble and the sky made of pink-purple marble are above the black belt. The sun row is broken with white sheets with the names of «Aeroporto». There are good-looking cast-iron ventilation bars above, throughout the whole platform. They are within rhombuses formed by the «inversion» tracks. Each bar has golden letter «M» in the centre. Wooden benches are placed along the axis of the station with guides fixed on their backs – design used in all the following one-span stations. The station is illuminated with luminescent lamps assembled in conic chandeliers. Earlier the lamps were brought in groups mounted with semicircular shades. They, in turn, were fixed around one big spherical shade. However such illuminating system provided too little light and it was replaced with less aesthetic but more practical one.

The station has two exits. Staircases go up from the southern and northern ends of the central hall, which is separated from the entrance halls with metal decorative bars.



Kropotkinskaya

Date of opening –

15th May 1935, known as Dvorets Sovetov (Palace of Soviets) until the 20th March 1957

Construction of the station –

shallow, column, three-span

Architects

of the underground part –
A. Dushkin and Ya. Lichtenberg

Grand-prix of the World Industrial Exhibition of 1937 (Paris), Grand-prix of the World Exhibition of 1958 (Bruxelles), The state premium of USSR «For architecture and construction» (1941)

The first name of the station was connected with an ambitious project of the former USSR leaders. It was projected to build a huge public, political, administrative, cultural and educational centre – Palace of Soviets, on the bank of the

Moskva River, over Prechistsinskaya Naberezhnaya, between Vsekhsvyatsky Pereulok and Soyomonovskiy Proyezd, at the place of the Cathedral of Christ the Savior destroyed in 1931. An international competition was announced. For example, Le Corbusier presented the project of a building in which «human masses» had to enter the conference hall «turning around turbine blades». However it was not considered advanced enough. The winner (architect A. Dushkin) projected to build an enormous sky-scraper with a statue of Lenin on the roof. Searchlights were projected in his eyes and a reading hall for 150 persons in his skull.

The huge Palace of Soviets required an appropriate metro station. Kropotkinskaya was built in time. But only the foundation of the palace was built and the assembling of metal structures began (were dissembled for defence) before World War II. After the war, it was decided to cancel the construction of the palace. In 1957 the station was renamed to Kropotkinskaya.

Everyone who appears there has an inexpressible, anxious and religious feeling. If not being distracted and hurried, one can feel the state of underground weightlessness, flight among clouds. The architect failed to build a temple of earth power – Palace of Soviets, similar to the Tower of Babel but created a temple of underground heaven, similar to Karnak. The station has two lines of columns – broadening-up massive square and elegant decahedral in turn. The columns «open» from the caps closing in and forming a hipped roof. Vaults disappear dissolving in height. The effect is reinforced by illumination. Lamps are hidden in the column caps while their rays are directed upward. They spread by facets of white domes, making the feeling of endless space above head. The impression is intensified by colour spectrum – snow-white plastered vaults, cloud-white slightly fancy marble of the walls and columns from the Koyelginskoye Deposit. The floor is covered with pastel grey and pink granite from Vyborg as on a chessboard.



Sokolniki. Central hall

Sokolniki

Date of opening –

15th May 1935

Construction

of the station –

shallow, column, three-span

Architects

of the underground part –

I. Taranov, N. Bykova

Grand-prix of the World Industrial Exhibition of 1937 (Paris)

Sokolniki is the first station of the Moscow Metro. It was actually a standard for all other shallow three-span stations. It was also the first station based on the idea of «antiunderground». The aim of architects and designers was that a person in the metro appeared to be not

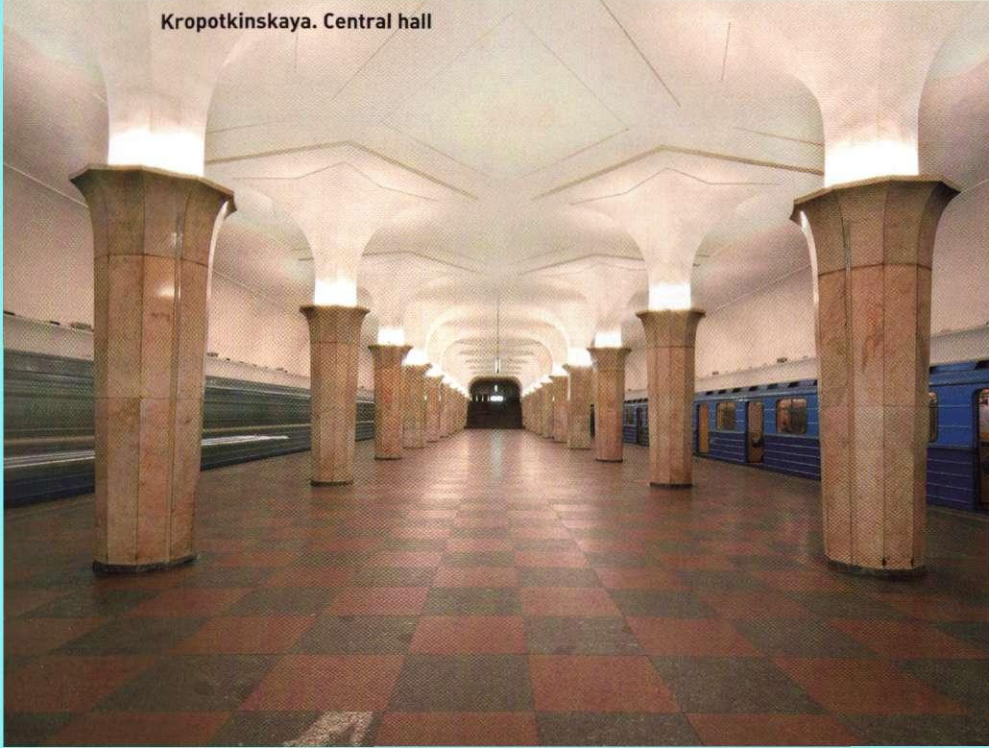
under ground but in a kind of other space which is perceived as closed but felt as endless and elevated.

The only entrance is located in the centre of the station on a staircase landing. One look from there let realize that the station is very high and its northern and southern ends seem to be endless. Such effect is made by precious proportions and harmonic simplicity of decoration, without any redundant decorative details.

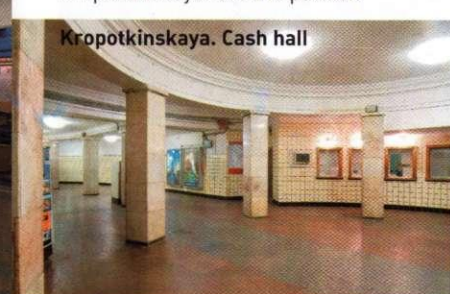
Sokolniki is in light, pastel colours. The flat ceiling simulates Italian ceilings of the Renaissance (similar to the ceilings of the Church of St. Maria Maggiore in Rome). Two lines of square columns, which mark the border between the distribution hall and platforms, support them.

The columns are faced with various Ural marbles. White, cream-coloured, and beige marble from the Prokhorovsko-Balandinskoye Deposit is so clean that is translucent when polished. Light grey, bluish-grey, banded, fancy marble with large sugar-white inclusions from the Ufaleyskoye Deposit is as specially created to let an eye to feel the deepness of the stone. Dark marble, ranging from red-brown to black with white winding veins, from the Sadakhly Deposit is very delicately used as narrow stripes along the caps and bases of the columns. The upper part of the walls is faced with light cream-coloured glazes, the lower part is with black glazes. The name of the station is written with nickel-plated letters on the black glaze background.

Kropotkinskaya. Central hall



Kropotkinskaya. Ground pavilion



Kropotkinskaya. Cash hall



Teatralnaya

Date of opening –

11th September 1938, known as Ploshchad Sverdlova till the 5th November 1990

Construction of the station –

deep, pier, three-span

Architect of the underground part –

I. Fomin

Transition to stations Okhotny Ryad and Ploshchad Revolyutsii



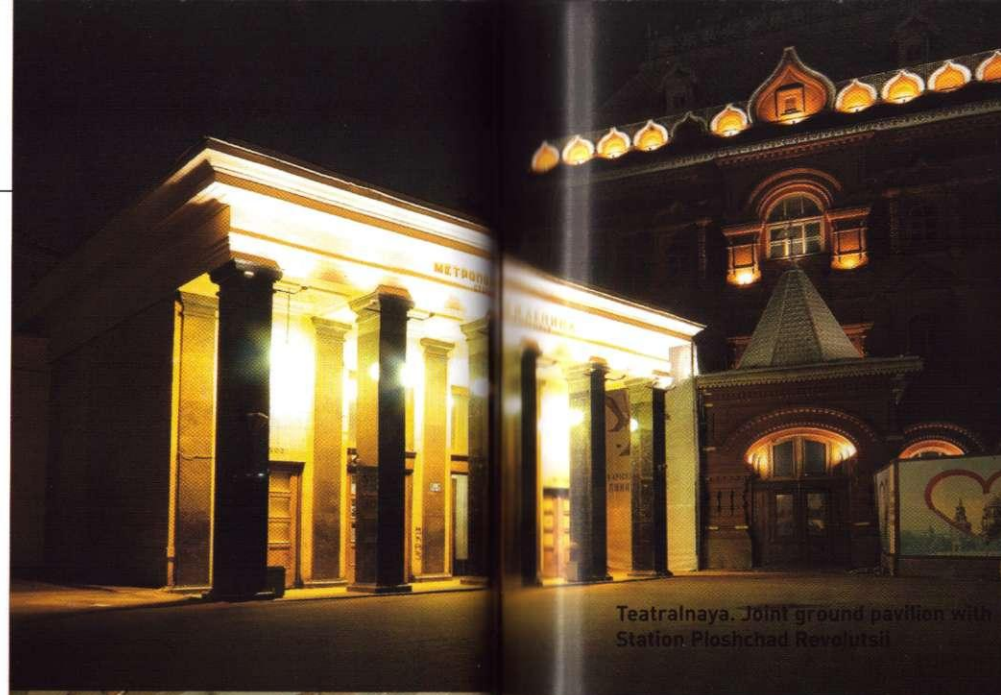
Porcelain medallions on the vault of the central hall



The cubic pylons of Teatralnaya are faced with slightly yellowish grainy marble.

The pylon edges are decorated with round broken-rib columns. Lamp-brackets with two white spherical shades are between the columns. Benches are placed at the bases of the pylons.

The vault of the very short central hall is decorated with rhomb-like coffers, while the vaults of the track tunnels are with square coffers. There are round porcelain medallions along the base of the main vault – «Folk Music and Dance» manufactured at the Leningrad Porcelain Factory by painter Danko's cartoons. The transit to station Okhotny Ryad begins with a bridge in the central part of hall, which ends by a small hall from which a long running-up passageway starts (built in 1945-1946). The left and right walls of the small hall have medallions with Chaikovsky's profiles. The pediments of the bridge are adorned with bas-reliefs of pair ballet jump and ballet support. The northern exit ends in the underground entrance hall common with station Okhotny Ryad. There is a portrait of K. Marx on the wall made of red and white marble as Florentine mosaic.



Teatralnaya. Joint ground pavilion with Station Ploshchad Revolyutsii



Escalator hall of the ground pavilion



Teatralnaya. Central hall





Konkovo

Date of opening –

6th November 1987

Construction of the station –
shallow, arched

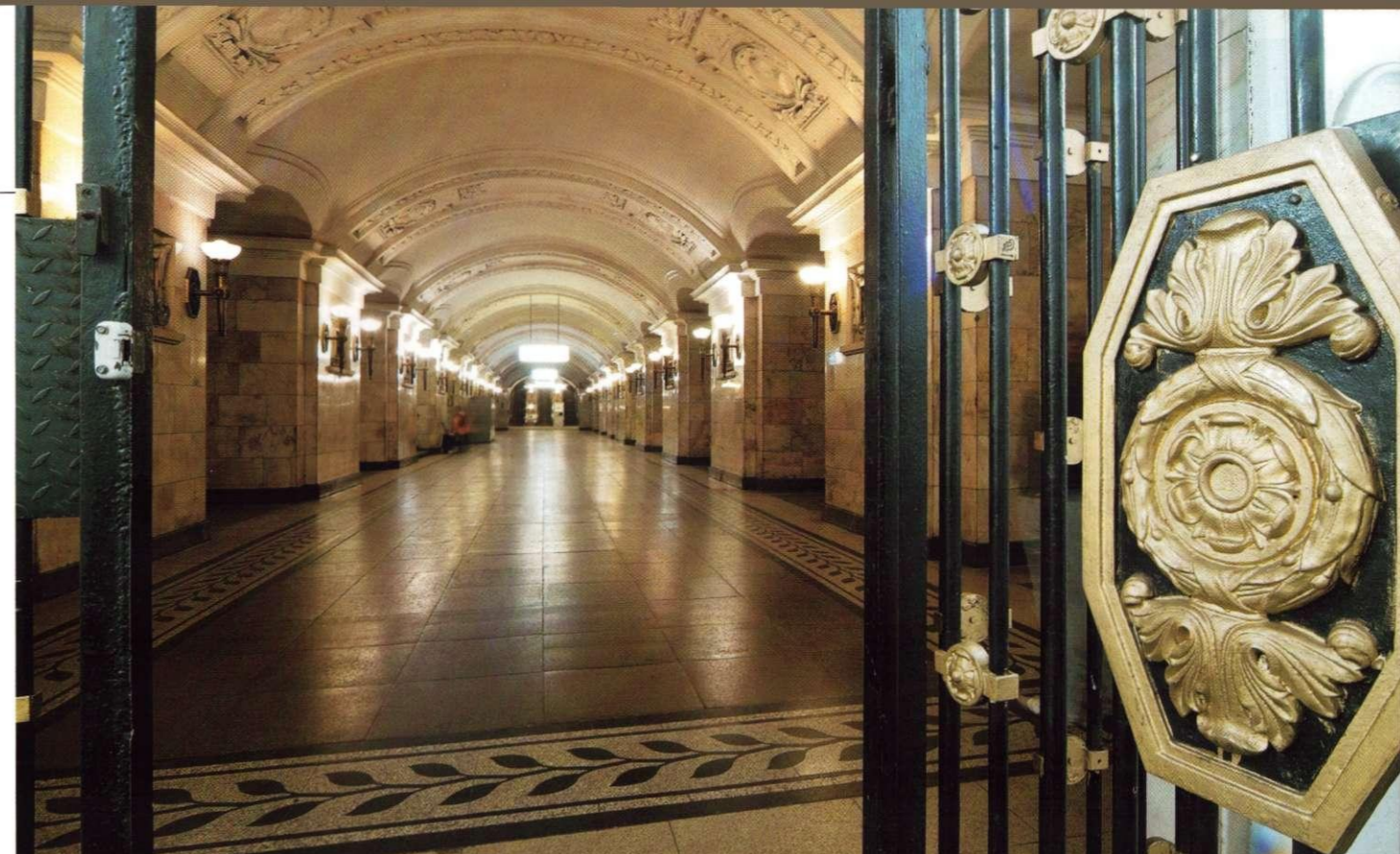
Architects of the underground part – N. Shumakov,
G. Mun and N. Shurygina

It is a one-span station. The transverse cross-section of the vault has a shape of horseshoe. So the architects made play with the name of the station. To intensify feeling, the

whitewashed vault of the station is split up regularly with narrow cuts faced inside with metal panel. Benches are placed along the axis of the station with guides fixed on their backs.



Konkovo. Central hall



Oktyabrskaya

Date of opening – 1th

January 1950

Construction

of the station – pier,
three-span, deep

Former name – Kaluzhskaya
(before 6th June 1961)

Architect

of the underground part –
L. Polyakov

Transit to Station

Oktyabrskaya of the
Kaluzhsko-Rizhskaya Line

The basis of the station is massive pylons with cornices, which support quite flat vaults. The pylons are faced with Ural ivory-coloured marble with dark inclusions. The walls are faced with light yellowish tiles and raised ceramic gilded stars and laurels. The floor is covered of red granite with light grey edging and laurels made of black gabbro on this background. Moulded belts stretch throughout the vaults with wreaths at the ends in which

are sideviews of warriors and plates as if for their names, but they are empty. Torch lamps illuminate the station with calm light; its atmosphere calls to be unhurried and do not disturb eternal peace of unknown heroes. The perspective of the hall opening from the escalators ends with a sky-blue arch with a lattice gate. The arch may be perceived either a sanctuary part of a church crypt or the midday sky or, maybe, Heaven.



Oktyabrskaya. Niche at the blind end of the central hall

Ground pavilion

The ground pavilion is a classic triumphant arch built in a constructivist building. Two sculptures of military buglers (sculptor G. Motovilov) are placed above the entrance. The architecture of the cash hall copies the Janus Arch (Rome) with four arched portals. The escalator is covered with a hip-roof; modeled girls with funeral wreaths in their hands are placed on the vault.



Krylatskoye

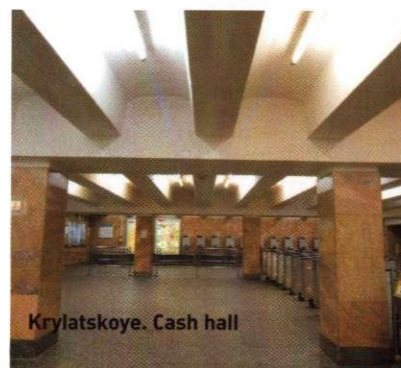
Date of opening –
31st December 1989

Construction of the station –
shallow, arched
Architects of the underground part –
N. Shumakov and G. Mun

The terminal station of the Filevskaya Line. The unique feature of the station is an asymmetric vault. The southern (left from the centre) wing gradually descends to the basement of the track. However toward the top and further on the right wing, massive rectangular cantilevers extend more and more, divided by broadening

troughs. All this grooved structure leans against the wall of about 3 m high (from the base of the track). Lamps are placed in the troughs along the line connecting the vault and wall. Such construction of the vault should look like a wing underlining the integrity of the station name and its design.

The wall is faced with original

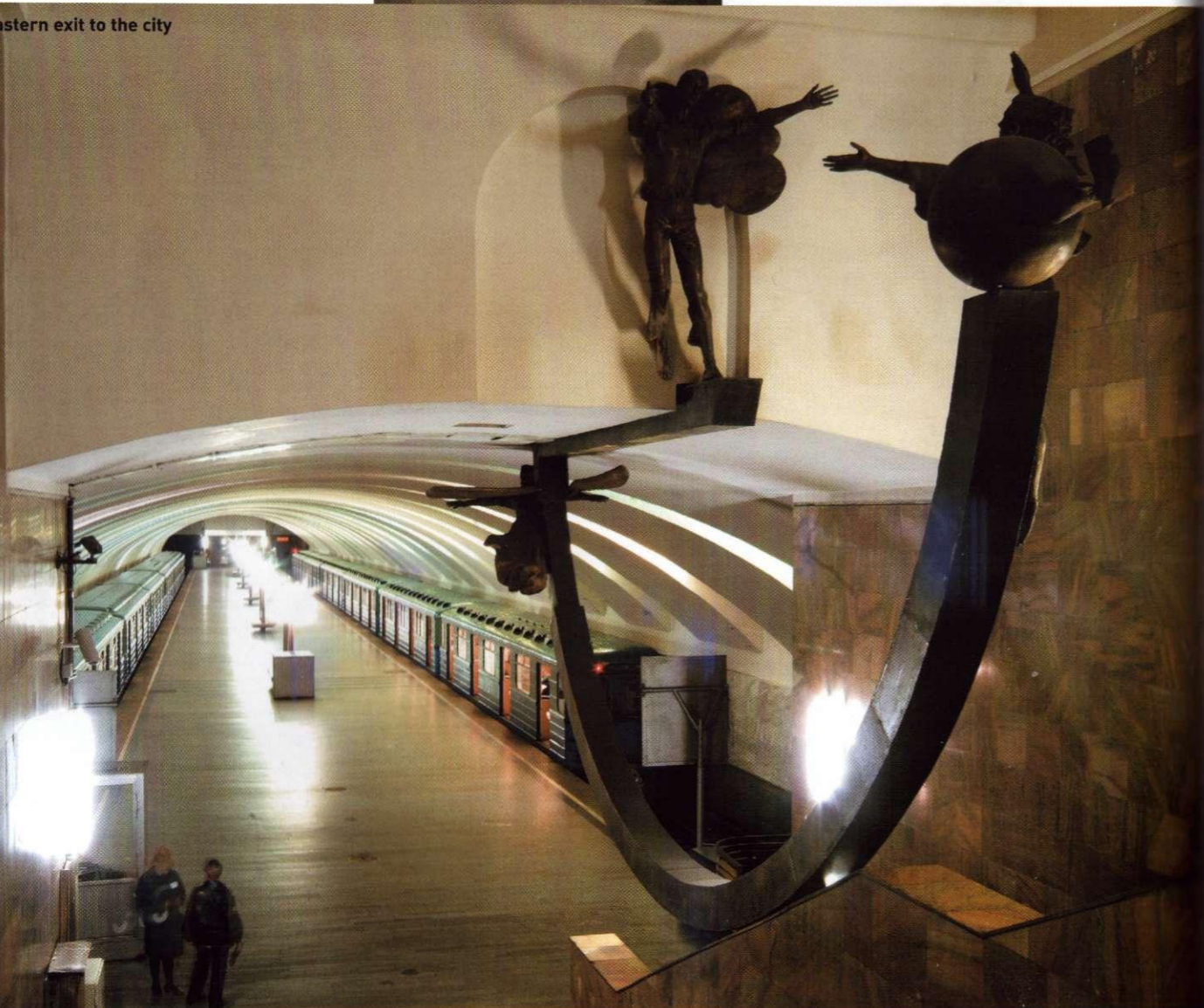


Krylatskoye. Cash hall

parallel and stratified white-grey-brown marble. Wooden benches are placed along the axis of the station with the name of station and guides fixed on their backs. Exits to the city are in both ends of the station. The eastern exit is more interesting than the western one. A copper semicircular beam is fixed between the staircase and escalator. There is a figure of a woman flying toward the platform at its western end. She is not Nike because wings are fixed with straps on her arms. On the other end of the beam – a barefooted girl with a ball flies toward a guy.

The western exit on the side of the entrance portal is decorated with a figure of a guy with broken wings.

Eastern exit to the city



Kuntsevskaya

Date of opening –
5th June 1965

Construction of the station –
open with a central platform
Architect –
R. Pogrebnoy

A typical ground station with a central platform. The columns supporting the shed are faced with light marble. There are two exits to the city.



Kuntsevskaya. Tracks and the station pavilion

VDNKh

Date of opening –
1st May 1958
Known as VSKhV until the
12th December 1959

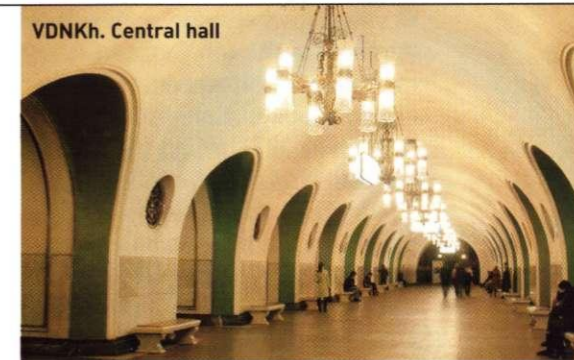
Construction of the station –
deep, pier,
three-span
Architects of the underground part –
I. Taranov, N. Bykova,
I. Gokhar-Kharmandaryan,
and Yu. Cherepanov

VDNKh is quite ascetic. The pylons gradually go into the vaults and are faced with white marble only below. There oblique facets are painted green. The only decoration is large cast bars on ventila-

tion openings and intricate chandeliers with crystal lamps. The arch of the northern exit is adorned with moulding presenting oak leaves.

In 1997 the new southern exit was opened. It is a short passageway faced with snow-white marble leading to the escalator. It is illuminated with plastic sconces with sodium halogen lamps. The escalator carries passengers to the great rectangular underground hall, faced with white marble, with a relatively low ceiling. The caps of the square columns are decorated with Gzhel majolica. There is a huge Gzhel panel (compared with other products of the enterprise) – «Fair in Zamoskvo-rechie», on the wall between the entrance and exit (painters M. Podgornaya and A. Tsaregorodtsev, 1997).

VDNKh. Central hall



VDNKh. Northern ground rotunda pavilion
VDNKh. Northern ground pavilion. Exit to the city





Novokuznetskaya

Date of opening –

1st January 1943

Construction of the station –

deep, pier, three-span

Architects of the underground part –

N. Bykova and I. Taranov

Architects of the ground pavilion –

V. Gelfreih and I. Rozhin

Sculptors –

A. Zelensky, S. Rabinovich,

N. Tomsy and N. Shtamm

Transit to Stations

Tretiakovskaya of the Circle Line and Kaluzhsko-Rizhskaya Line



Novokuznetskaya. Ground rotunda pavilion

Novokuznetskaya. Mosaic of the vault of the central hall

Novokuznetskaya was opened when the Soviet Army beat completely the leavings of the 6th German Army in Stalingrad. However the present-day look of the station was formed in 1971, when the central hall was made much longer during the construction of the transit to the new Kaluzhsko-Rizhskaya Line (now station Tretiakovskaya).

The pylons of the old part of Novokuznetskaya are massive. There are marvellous marble benches in the niches of the py-

lons on the sides of the hall and platforms. They were proposed by academician I. Zholtovsky who consulted the young authors of the project. There is a story that the benches were made of Carrar marble taken from the Cathedral of Christ the Saviour, just before it was demolished. The story is nice but hardly true. In any case, marble is from the Ural not Italy.

There are metal shields above each bench on the side of the central hall rounded with banners and legends «Glory to

Heroic Defenders of Leningrad», «... Sevastopol», «... Odessa», «... Stalingrad». On the platform sides the shields have the profiles of great Russian military commanders: Alexander Nevsky, Michael Kutuzov, Alexander Suvorov, Minin and Pozharsky, Dmitry Donskoy. The gypsum frieze runs through the whole central hall between the pylons and the vault with figures of soldiers and officers of different forces of the Red Army. There are signalmen, pilots, tankmen, infantrymen, marines, and cav-

alrymen. They all either plan operations or attack and no one retreats. The sculpture groups are separated with Orders of the Great Patriotic War. There is a shield wording «Glory to Brave Soldiers of the Great Patriotic War» above the exit to the city. Bykova and Taranov used the geometrical picture of the Roman Tomb of the Valeries as a model for decorating the vault of station (adopted by Zholtovsky) but placed six small mosaics along its main axis. They were designed by A. Deineka and made by Leningrad craftsman V. Frolov. After his death during the siege of Leningrad, the panels were brought from the city by the Road of Life. The mosaics present absolutely peaceful scenes on the background of the blue sky (only one panel has no sky at all). The first one, starting from the northern end, shows girls harvesting peaches. The second – foundry. The third – workers moving a tractor by an assembly line. It is interesting that the lamps in the panel are similar to those used in the first

metro lines and that the ceiling of the workshop is made of glass. The fourth panel – builders. The fifth – a pilot takes his place in an airplane. The last panel has the most dynamic scene. Early morning. A girl-skier looks at a blue steam locomotive running by a viaduct and a pink airplane flying in the sky.

All the mosaics are illuminated by the torchieres placed along the main axis of the central hall. Till 2005 the shades and lamps were not bright, so the station seemed dark and the panels were poorly seen. Now it is the past, so one, sitting on a bench, can admire the sky through upward «windows». The idea to establish such lamps was also supported by Zholtovsky. Various stones were used for the decoration of the station, pylons, walls, and floors. The old part of the station was faced white, yellowish, and ivory-coloured marble of the Prokhorovsko-Balandinskoye Deposit (Sverdlovskaya Oblast). There are inserts of very original marble from the Agvenarskoye

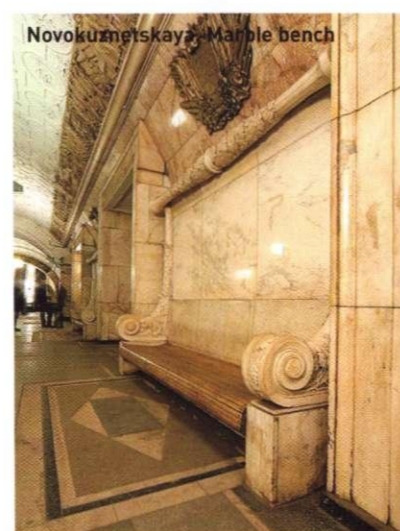
Deposit (Armenia) in the niches of the pylons below the light backs of the benches shapes as half-unfolded rolls. This pink to delicate lilac and light violet stone is speckled with a dense network of thin but bright pink, violet, and brown veins. The walls of the new part of Novokuznetskaya are entirely faced with this stone. The floor of the station is made of the same light and warm marble of the Prokhorovsko-Balandinskoye Deposit with geometrical inserts of dark grey Karkodinsky marble (Ural) and black Khorviransky marble (Armenia). The poles and pedestals of the torchieres are decorated with fancy dark limestone from the Uzbek Almalyk Deposit and red limestone from the Georgian Shrosha Deposit.

Ground pavilion

The pavilion of Novokuznetskaya is the first in Moscow rotunda with a massive flat Romanesque dome and colonnade around. The vault of the dome is adorned with Frolov's seventh mosaic – «Parade of Athletes».



Novokuznetskaya. Central hall



Novokuznetskaya. Marble bench



Vorobiev Gory

Date of a construction of the metrobridge – 1958

Architects of the metrobridge – engineers

V. Andreyev and N. Rudomazin, architects K. Yakovlev and A. Susorov

Date of opening – 12th January 1959

Since 25th October 1983 on 14th December 2002 station has been closed for passengers, and with 1986 for 2002 the metrobridge has been closed for movement of trains

Called Leninskiye Gory since the 12th January 1959 and Vorobiev Gory since the 12th May 1999

Architects of station – M. Bubnov, A. Markelov, M. Markovsky, A. Ryzhkov and B. Thor (1959), L. Borzenkov, A. Vigdorov, G. Mun, N. Rasstegnyayeva, co-author N. Soldatova, Head of the Team G. Petrova (1999-2002, reconstruction)

Station Vorobiev Gory has a complicated history. It was opened in 1959 when called Leninskiye Gory. It became the first metro station on the bridge at that time. Architects placed it on the lower level of the autometrobridge over the Moskva River connected Komsomolsky Prospect and Leninskiye Gory. The components of the bridge became construction and decorative elements of the longest (270 m) station of the Moscow Metro.

However, till 1983 the structures of the station and the lower level of the bridge became so decrepit that it was dangerous to use them. First trains became to pass the station without stop. Then, metro service was stopped through the bridge and temporary side metro bridges were built. The service toward station Yugo-Zapadnaya was opened in 1986 and toward Sokolniki in 1987. The reconstruction of the station began in 1999 when it was

Vorobiev Gory.
View from quay of Moscow-river

called Vorobiev Gory. The new station was opened on the 14th December 2002. It has become 3 m wider and slightly higher. It is 530 m long totally while the distribution hall is 220 m long. It is the longest station of the Moscow Metro.

The main decoration of the station is the view of the Moskva River bend. There are practically no side walls (only bases). Instead of them steel frames with glass packs decorated with aluminium mouldings. Up-stream one can see Vorobiev Gory with a ski jump and the Great Sports Arena, down-stream – Druzhba Sports Hall, Andrew Monastery, building of the Russian Academy of Sciences («Golden Brains» informally), and Neskuchny Garden. However the real beauty of the station is seen outside, when looking at it at night in particular. It looks like a giant glow-discharge lamp hanging over dark water. The best view is from the observation sight of Vorobiev Gory.

Vorobiev Gory. Central hall

Rizhskaya

Date of opening – 1st May 1958

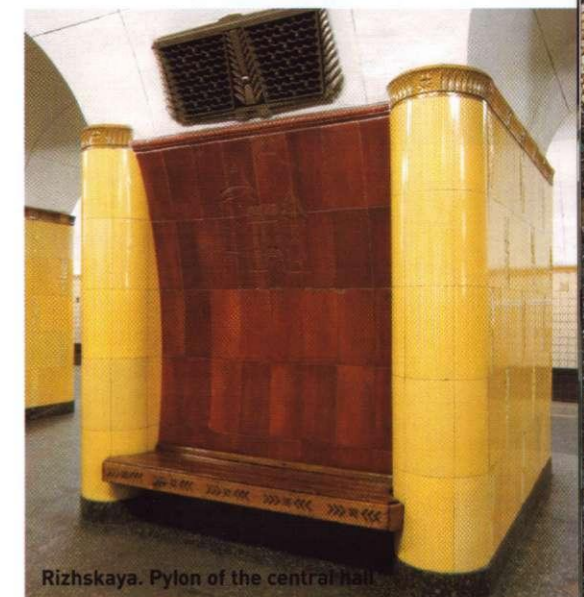
Construction of the station – deep, pier, three-span

Architects of the underground part –

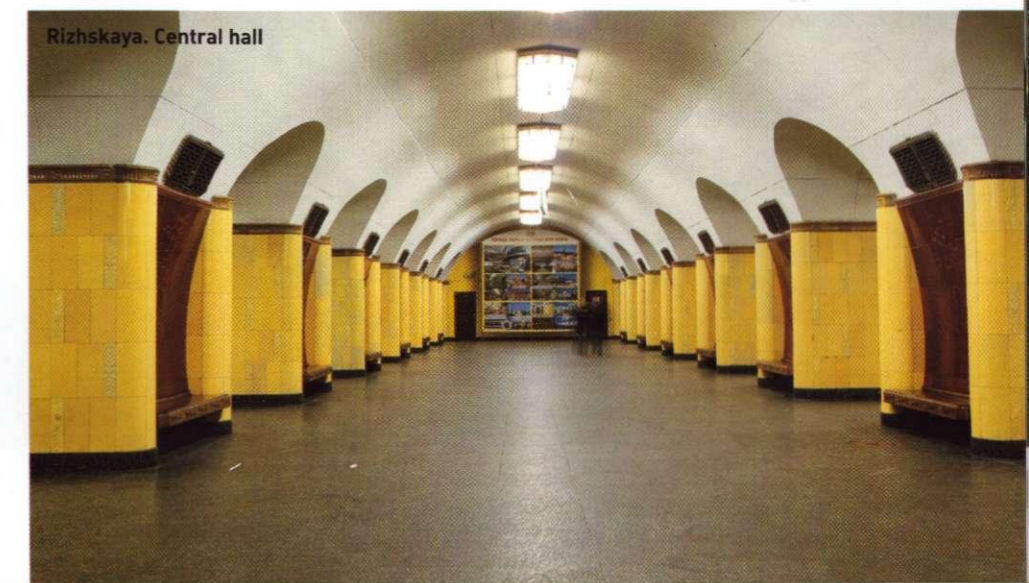
A. Reinfelds and V. Anpsitis

Rizhskaya is constructively similar to two previous stations but much differs by decoration. It is an absolutely ceramic station. The walls are faced with light yellow tiles while the pylons are with yolk-yellow and claret-coloured tiles. So the station is called «fried eggs with bacon». Hardly visible very thin high relieves on raw ceramics decorate the claret-coloured surfaces of the side of the central hall. They show well-known architectural and industrial structures of Riga and sights of other Latvian cities, such as House of Government, House of the Central Committee

of the Communist Party of Latvia, old Riga, Museum of Arts, Academy of Arts, heat power station, VEF, port, central kolkhoz market, Kemeris (region of Jurmala), seashore. There are also silhouettes of Moscow State University and Academy of Sciences on the first pylon of the western end that manifests the inviolable relations between Riga and Moscow. The Latvian national colouring is highlighted with ornaments on the sides of station benches and tiles facing the platform walls.



Rizhskaya. Pylon of the central hall



Rizhskaya. Central hall



Borovitskaya

Date of opening –

1st January 1986

Construction

of the station –

deep, pier, three-span

Architects

of the underground part –

L. Popov and V. Volovich

Transition to stations

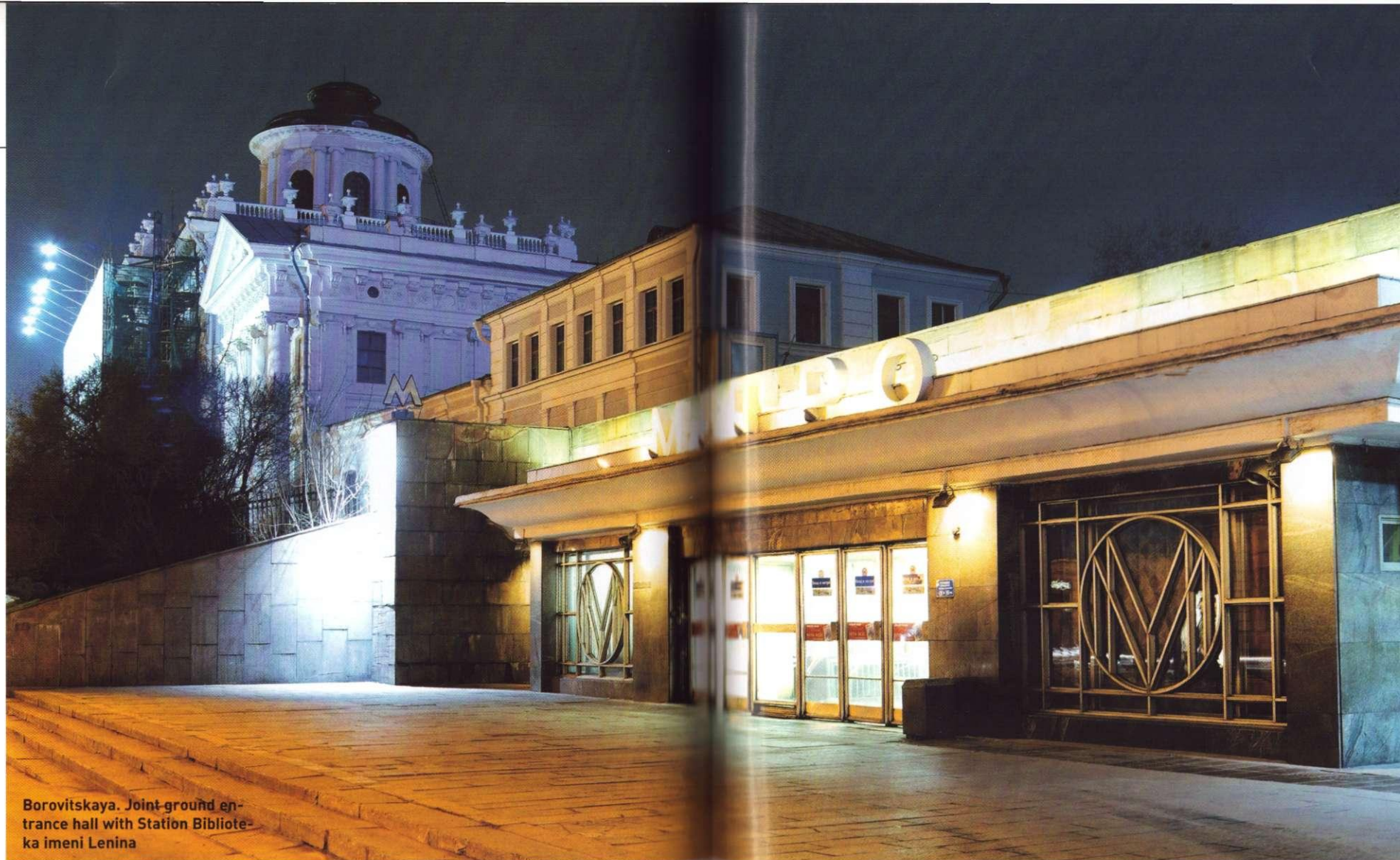
Arbatskaya of the Arbatsko-

Pokrovskaya Line and

Biblioteka imeni Lenina

The long and narrow pylons with slightly oblique edges stretch out the station like walls with gates. They contract upward forming wide cornices just below the base of the vault, which jut out toward the central hall and platforms. The cornices are put into shape of rectangular cells with fluorescent lighting in each. The inter-pylon passes are narrow and almost rectangular. Their upper edges are slightly rounded, while the ceiling is flat. This creates the feeling of fortress massiveness and desire to incline the head. The architects used this technique to show the appearance of the unassailable walls of the Moscow Kremlin.

The Kremlin motive is found in the facing of the station. The colour decoration is composed with three main colours – red, white, and golden. The front side of the pylons and walls are faced with white Koelga marble. It reminds the white-stone Kremlin of Prince Dmitry Donskoy. The ceiling and side walls of the pylons



Borovitskaya. Joint-ground entrance hall with Station Biblioteka imeni Lenina

are faced with red facing bricks. This is an artistic interpretation of the present-day red-brick Kremlin built by Prince Ivan III the Great. Some bricks, averaging a dozen in each pass, on the walls and ceiling have ceramic miniatures. They simulate brands of ancient masters – «letter», «numeral», ship, bird, «miracle of St. George against dragon», stockaded town, fleet-footed steed, bouquet, stone fortress, two persons in a window, sea with dolphins, sturgeon in net, cannon, jet airplane, vehicle, and starting missile. The southern (blind) end of the hall is adorned with a huge ceramic panel (by I. Nikolayev) on which a tree with a crown in the form of the USSR map grows from the Kremlin. There are 15 human (male and female) figures

waist-high in national clothing in the crown. A reference band, indicating the name of the given Soviet republic, is below each figure. A golden earring field is near the foot of the Kremlin wall and cloudless sky is above the Kremlin. The cup of the decorative dry fountain with low granite edge is placed in front of the panel. Borovitskaya is decorated in one more, not so clearly manifested, style as well as the fortress style. If staying back to the escalator running to Arbatskaya and looking along the central hall, one easily note that the shape of the cornice cells is similar to the shape of ventilation deflectors of a metro carriage, while the shape of the passes looks like its windows and the vault outline of the blind end copies the outline of an E-series carriage end.



Borovitskaya. Arch of the escalator tunnel



Borovitskaya. Central hall

Tsvetnoy Bulvar

Date of opening –
31st December 1988

**Construction
of the station –**

deep, pier,
three-span

Architects

of the underground part –

P. Pogrebnoy, V. Filippov,
Yu. Sheverdyayev

Architect

of the ground pavilion –

M. Feldman

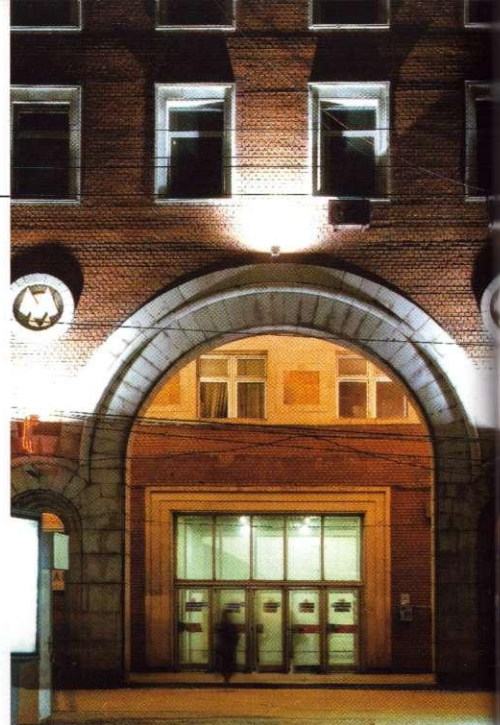
The rectangular pylons of the station are very massive. They are twice as wide as the interpylon passes. The pylons broaden upward, gradually turning into the vault. To make

the structure visually lighter, the corners of the pylons are oblique and processed in such a way that look like the side scenes of the artistic exit of the circus ring.

The pylons are faced with light Koelga marble; the walls are with yellow-pink and cream-coloured marble from the Uzbek Gazgan Deposit, grey and bluish-grey Ufaleysky marble, and white marble the with «outburst» pattern of sugar-coloured calcite veins from the Armenian Davalu Deposit. The bases of the walls are faced with snow-coloured granite. The wide illuminated friezes made of matted translucent glass run throughout the whole central hall. They are adorned with stained-glass windows [artist V. Kalensky] with stylized flowers, greens, and

tree crowns. So, going through the station is to some extent going through Tsvetnoy (Flower) Boulevard to the Circus, which is located there. The large stained-glass window, with the portraits of well-known clowns Yury Nikulin, Michael Shuydin, and Oleg Popov, adorns the northern end of the station just near the exit to the city.

Tsvetnoy Bulvar.
Entrance to the station



Krasnogvardeyskaya

Date of opening –
7th September 1985,
known as Brateevo

in the project

Construction

of the station –

shallow, arched

Architects

of the underground part –

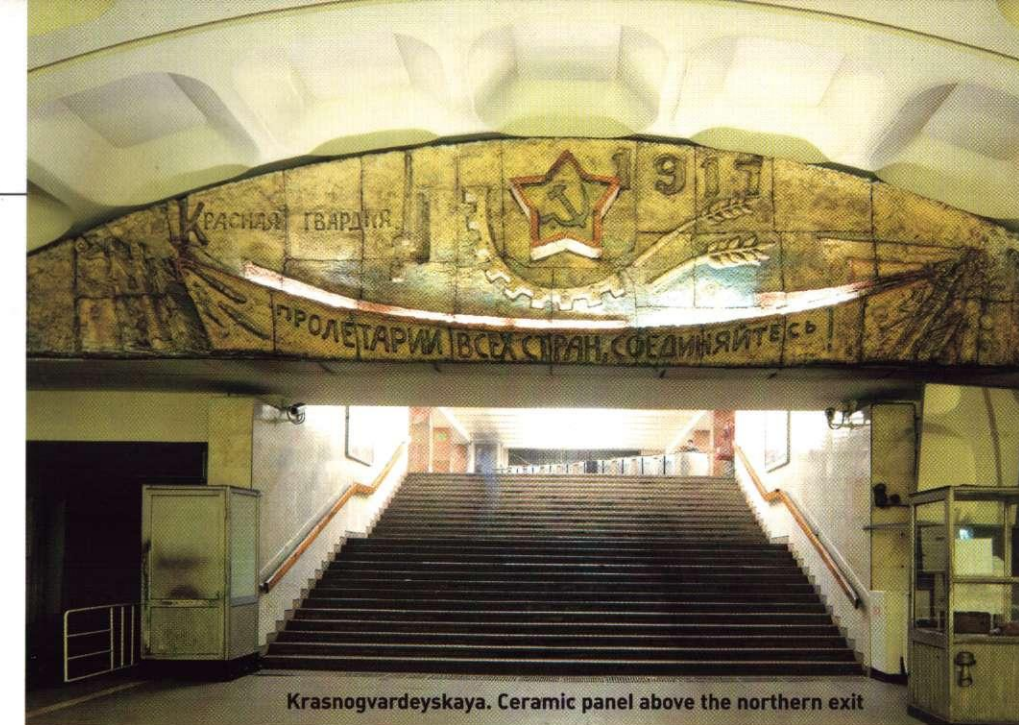
I. Petukhova

and N. Shumakov

Krasnogvardeyskaya is a typical arched shallow station. The lower part of the walls is faced with grey granite. The vault is made of square concrete plates with very shallow coffers. There are no names of the station on the walls, they are fixed above the benches, which are made as squares around the

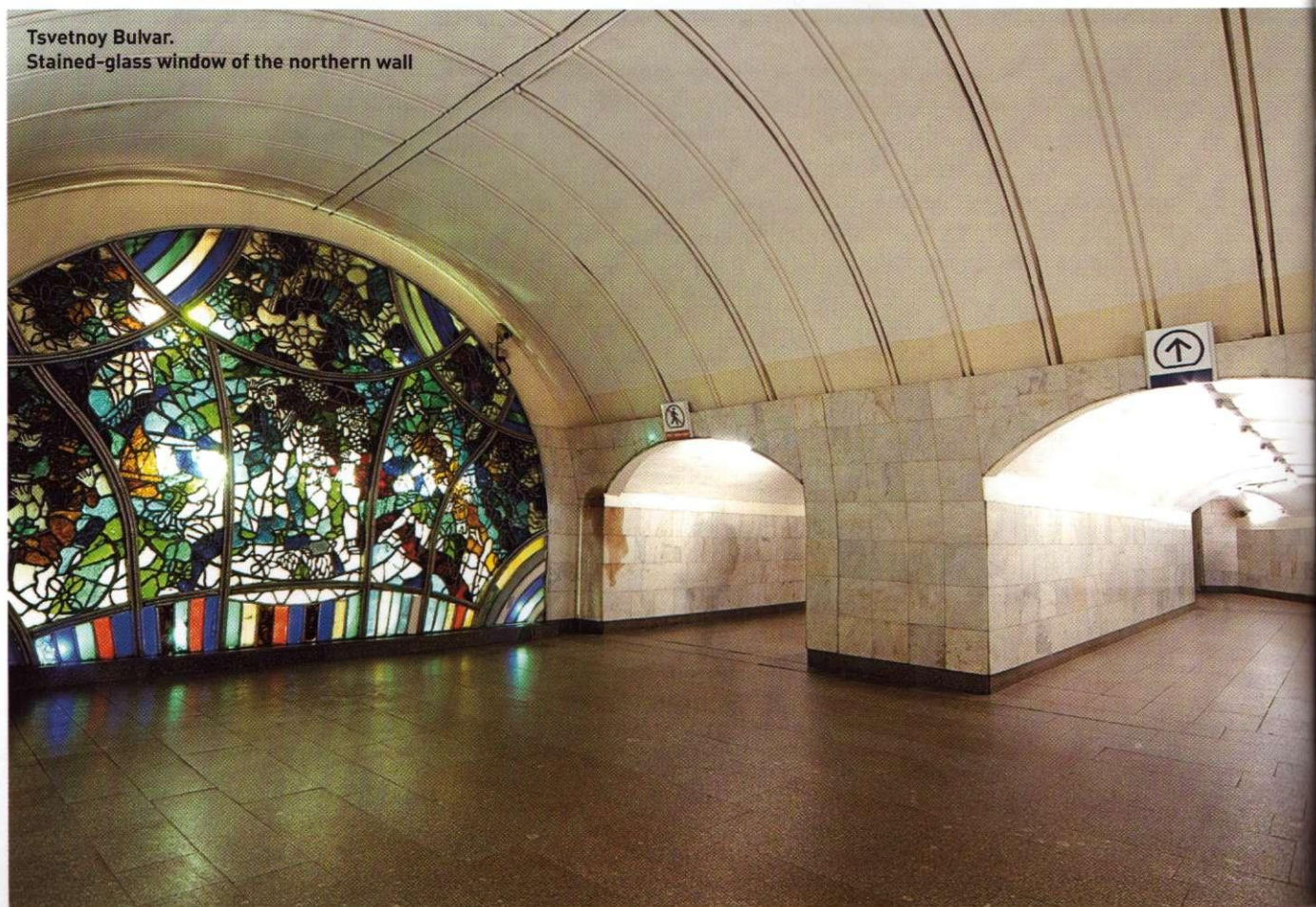
metal poles running along the main axis of the platform. There is a ceramic panel (sculptor L. Berlin) above the southern exit to the city. It pictures the Spasskaya Tower of the Kremlin placed in the «cradle» of rising sun. There is inscription «All power to the Soviets» in the upper part of the panel and poorly

visible inscription «History of the Bolshevik party» on the lower edge of the composition slightly jutting out toward the hall. The panel of the northern exit is made in the same manner. There is a red star in the middle, inscription «1917 Red Guard» above, and slogan «Workers of the world. Unite» below.



Krasnogvardeyskaya. Ceramic panel above the northern exit

Tsvetnoy Bulvar.
Stained-glass window of the northern wall



Krasnogvardeyskaya. Central hall



Avtozavodskaya

Date of opening –

1st January 1943,
known as Zavod imeni I.V.
Stalina till 1956

Construction

of the station –

deep, column, three-span

Architect

of the underground part –

A. Dushkin

The architect of Avtozavodskaya A. Dushkin wrote: «I like this station because it is made with one breath. It clearly manifests the constructive essence and, as with Russian temples, the clearness of the working shape». However, as his wife revived, the design of station «Zavod imeni Stalina» required considerable creative efforts from Alexey Nikolayevich: «I remember well how the project of station «ZIS» (now Avtozavodskaya) was developed. My husband made some drafts, which did not satisfy him, he put off the work and was deep in the book of Timiryazev «Life of Plants». He ignored my questions why he needed that and only asked to play Bach's fugue. When finished the book, he sat down at the drawing-board. He made eleven drafts of the station but chose only one, which was realized. For me the character of the station is music and polyphony. While going down by the escalator, the columns appear one by one and then as if combine in common sounding – as the finale of the cadence brought to key...»

The design and architecture of Avtozavodskaya is a variation of Kropotkinskaya. The high thin columns support the flat vaults. Starting from the caps, the columns broaden upward and form ribs, which flatten, as if dissolve in the vault, without closing in. The columns are faced with marble of the Altai Oroktovskoye Deposit – light with black and lilac veins. The walls are faced with marble of the Prokhorov-Balandinskoye Deposit – light, mostly cream-coloured, baked-milk-coloured, ivory-coloured. The floor is covered with black diabase with the geometrical ornamental pattern made of square inserts of red and grey granite. There are small mosaics «Soviet people within Great Patriotic

War» (designed by F. Lent and V. Borodichenko, craftsman V. Frol'ov), forming broad friezes, above the facing of the walls – four on each side. The mosaics of the eastern wall are devoted to workers of ZIS (now ZIL). The western wall glorifies battle and peaceful work of the peoples of the USSR, which is possible due to implements manufactured in the ZIS plant.

The pair bas-reliefs made of greyish-yellowish Moscow limestone are on the walls in the central part of the station – «Pilots and constructors» / «Metalurgists and engineers» (eastern

wall) and «Peoples of the North» / «Peoples of the Caucasus».

Southern ground vestibule

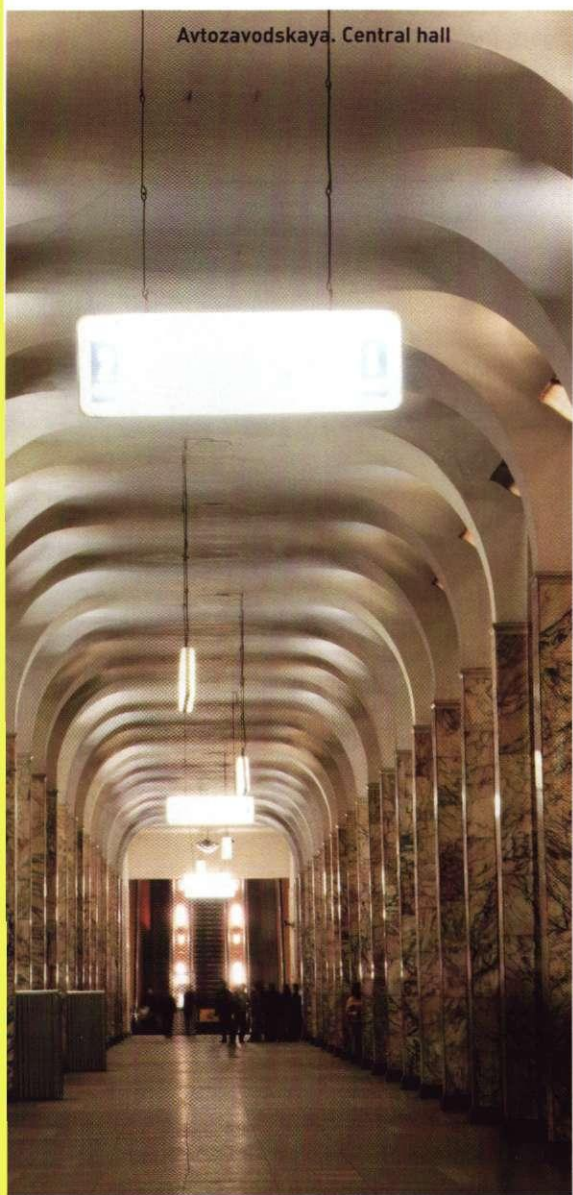
The two-storied southern pavilion is coeval with the station. The front is adorned with the semi-columns of labrador and very high decorative glassed arches of doorways with figured cast bars. The rectangular entrance hall of the station is behind the doors. It is connected with the round hip escalator hall by the wide bow-shaped passageway. Four doors to service rooms are decorated with marvellous cast-iron bars

with florid ornament in the Russian «grass» style. The walls of the vestibule are faced with whitish marble of the Uzbek Gazgan Deposit, while the walls of the passageway and entrance hall are with snow-coloured and cloud-coloured marble of the Ural Koelga Deposit. There is a big mosaic panel of many-coloured marble on the wall opposite the escalators – Parade on the Red Square. A partisan with a Maxim machine-gun, pilot, tank commander, soldier with a Mosin rifle, fighter with a Shpagin submachine-gun are on the armour of the tank, forming a pyramid. The

central figure of the composition is the saluting tank commander. An epic hero with ancient Russian helmet as a mount rises behind the defenders of the Motherland. He covers his eyes with his hand looking at onlookers who seem that he also salutes. The Kremlin on the background is reliably protected.

The vault of the entrance hall is decorated with painting on plaster – ribbons, orders, sparks of salute, sketches of work and rest of ZIL workers. There are also words: Peace, Labour, Freedom, Equality and Brotherhood.

Avtozavodskaya. Central hall





Novoslobodskaya

Date of opening –
30th January 1952

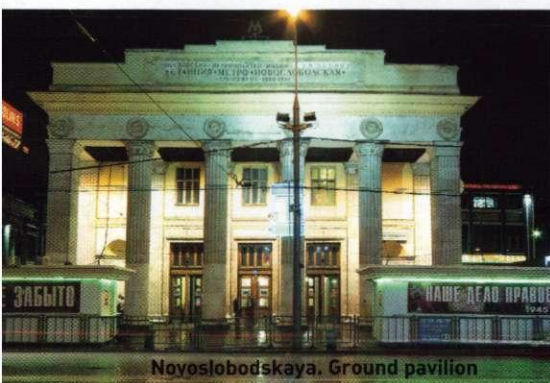
Construction of the station –
deep, pier, three-span
Architects of the underground part –
A. Dushkin and A. Strelkov
Transition to station
Mendeleevskaya

The most striking element of the station decoration is stained-glass windows illuminated from within. It seems that such decoration of the station should make it slightly Gothic but no Gothic is there at all. There is an underground epic chamber with windows opening to Fairyland. The comparatively narrow pylons of the station widen upward, toward the hall and platforms, and gradually go

into the vaults. The broad passes between the pylons are also arched. The connecting curve of the pass vaults and station vaults is decorated with golden cord in relief, which highlights the horseshoe-shaped arch. The same golden cord borders carinate arches above the horseshoe-shaped passes. It forms an arcade of kokoshniks in the central hall.

Latvian craftsmen in Riga by P. Korin's cartoons manufactured stained-glass windows. Medieval Russia has no idea of stained-glass windows. Hence Korin's works are not stylization but the first works of the new Russian epic style of arts and crafts. There are fantastic flowers, growing from antique vases, cooing pigeons, florid ornaments. There are medallions in the upper part of each stained-glass window. Twenty six of them have geometric patterns and five-pointed ruby stars. Other six are

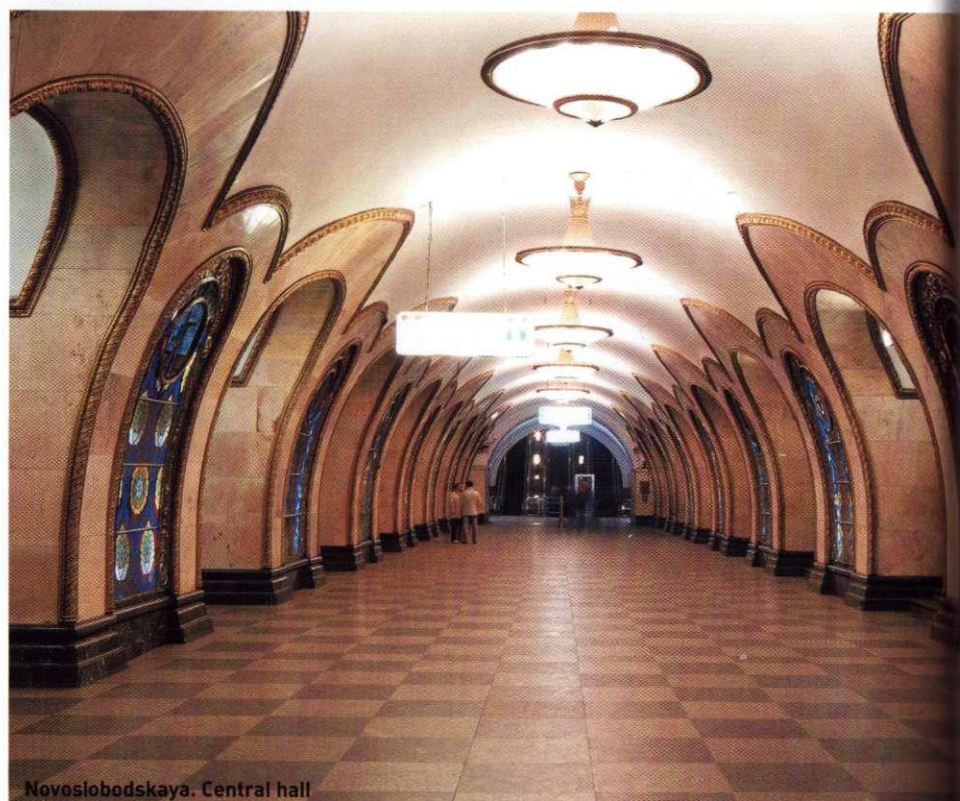
devoted to the integrity of workers, peasants, and intellectuals. They are «Pianist», «Painter», «Power Engineer», «Harvesting» (pay attention to umbrellas over tractors), «Geographer», and «Architect». A stunning mosaic panel is on the blind end of the station – a woman with a child in her arms going toward onlookers by flourishing earth. The baby turns up his arms to pigeons flying toward banner «Peace Throughout the World!» On the background, a huge five-pointed star, golden sickle and hammer rise over the planet as the sun. The pylons, passes, walls, and passageways to the escalators are faced with light Ural marble, grey and yellow with dark inclusions, of the Karkodinskoye Deposit. The floor of the station is a chessboard made of plates of grey granite and black gabbro. The station is illuminated with chandeliers along with illuminated stained-glass windows.



Novoslobodskaya. Ground pavilion



Novoslobodskaya.
Transition to Station Mendeleevskaya



Novoslobodskaya. Central hall



Aleksandrovsky Sad.
View from Platform 2

Aleksandrovsky Sad

Date of opening –
15th May 1935

Construction of the station –
shallow, column, four-span
Former names –
Imeni Komintern
(until 1946), Kalininskaya
(until 1990), Vozdvizhenka
(until November 5, 1990)

Architects of the underground part –
A Gontskevich and S. Sulin
Transition to stations Arbatskaya of the Arbatsko-Pokrovskaya Line and Biblioteka imeni Lenina

Aleksandrovsky Sad is the most non-Moscow station of the Moscow Metro. It is the only underground station in the city where platforms are located on its both sides while tracks are between the platforms. The ceiling is supported

by three lines of hexahedral columns, one line on each platform and one more between the tracks. Moreover, the station is curved.

The walls and columns of the station are faced with yellow, cream-coloured, and brown Crimean marbled limestone from the Kodykovskoye Deposit. The floor is with red granite. The walls of transit passageways are faced with ceramic tiles mostly of light colours. The floors and steps of numerous staircases are made of granite. Common daylight lamps illuminate the station. There are sconces and illuminator lamps on the walls in the transit passageways. A foot-bridge is made in the middle of the station to cross the tracks. Granite bust of M. Kalinin is between the bridge and cash hall. He was the Chairman of the Russian Central Executive Committee, Central Executive Committee of the USSR, and Presidium of the Supreme Soviet of the USSR for more than a quarter of the century – formally the head of the state but actually a decorative person.



Aleksandrovsky Sad.
Entrance to the station from the Russian National Library



Aleksandrovsky Sad.
View from Platform



Park Kultury, Circle Line

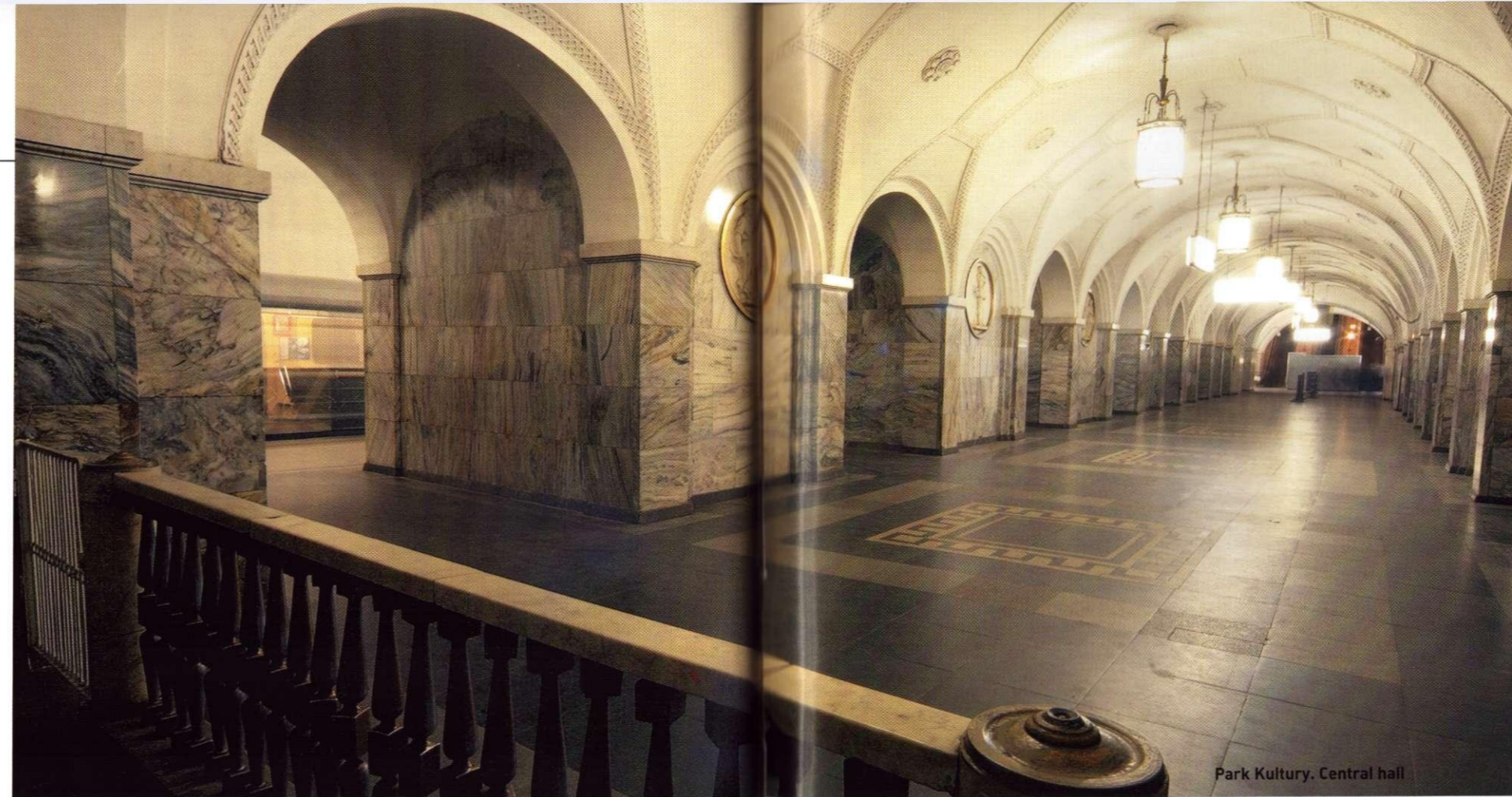
Date of opening – 1st January 1950

Construction of the station – deep, pier, three-span

Architect of the underground part – I. Rozhin

Transit to Station Park Kultury of the Sokolnicheskaya Line

On the face of it, Park Kultury seems to be a dark station, particularly compared with bright mosaic and festive Kievskaya. The massive pylons are faced with very original marble from the Fominskoye Deposit of the Middle Ural, first used in the Moscow Metro. It is very decorative stone but of moderate and subdued shade. It has a streaky, spotted, and folded pattern of grey, dark grey, and greyish-yellow colours. The parts of walls with doors to technical facilities are faced with the same marble. The upper parts of the walls are faced with dark grey marble from the Ural Karkodin-



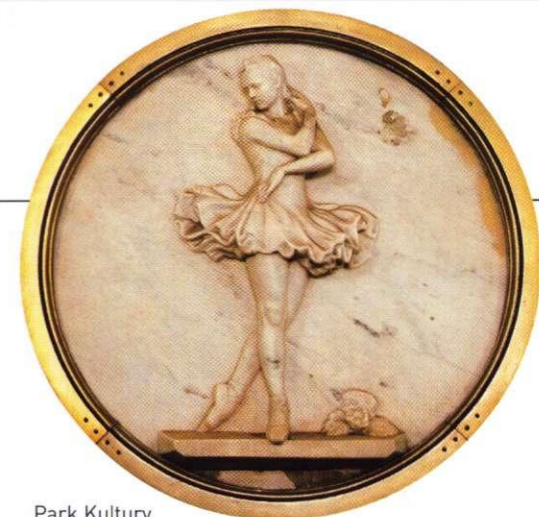
Park Kultury. Central hall

skoye Deposit with inserts of mat black marble of the Armenian Davalu Deposit, while the socles are decorated with deep black labradorite with sparkles of southern-night-sky colour from the Volynskoye Deposit. The floor of the platform is covered with grey granite and that of the central hall is with black diabase. It is also decorated with six squares of white and black marble with meanders. The station is illuminated with chandeliers in the form of large «Chinese lamps» suspended from the ceiling and four torchieres of the Empire style. The small metal bas-relief of A. Gorky and inscription «Gorky Park of Culture and Rest» made of metal letters are on the blind end of the station. The letters are regularly stolen. There are three long wooden benches with the legs and massive elbow-rests of white marble at the ends of each platform. Although the station has restrained and chamber architec-

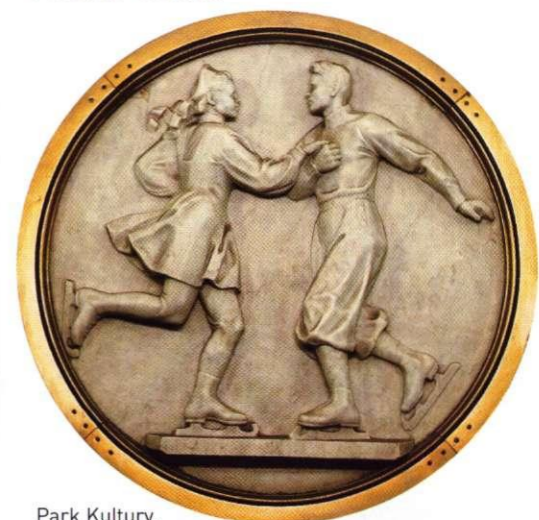
ture, it is rather cozy, and the abundance of black marble in the decoration of the walls and ceiling does not spurn or make it cold. On the contrary, this creates the feeling of a warm summer evening in the Gorky Park. The round marble medallions [sculptor S. Rabinovich] in metal frames are put in the niches of the pylons on the sides of the central hall and platforms tell how one can have a good time in the park. There are totally 26 medallions on 14 different subjects. It is needed to look over the platforms to observe all of them because the central hall has not all of them – no «Skiers» and «Music lessons». Let's go from the last carriage in the direction of station Kievskaya, reach the end of the platform, then transit to the other platform, and go backward. «Music lessons» – A young girl violinist is before a music stand and a female teacher analyses what she has played. «Chamber concert» – A female

singer plays music by score. There are flowers at her legs. «Flower-growing» – A little girl (with a pioneer tie and a basket in her hand) and a girl admire flowers. «Chess playing» – A father and his son play chess. The mother watches them playing. The boy is engrossed in thoughts and the father moves pawn. «Aircraft modelling» – Two boys, one with pliers in his hand, the other with a plane-table, admire the model they've just made. «Ballet» – Ballerina dances on the stage. Flowers are at her legs. «Lovers» – A young boy leans on a tree and, holding a book in his hands, reads poems to his girlfriend who sits in a wicker chair. Such chairs were in the alleys of the Gorky Park until the end of the 1960's. «Modelling» – Two boys are carried away with the construction of a working model of a lifting crane. «Football-players» – A sportsman stands with a ball in his hands.

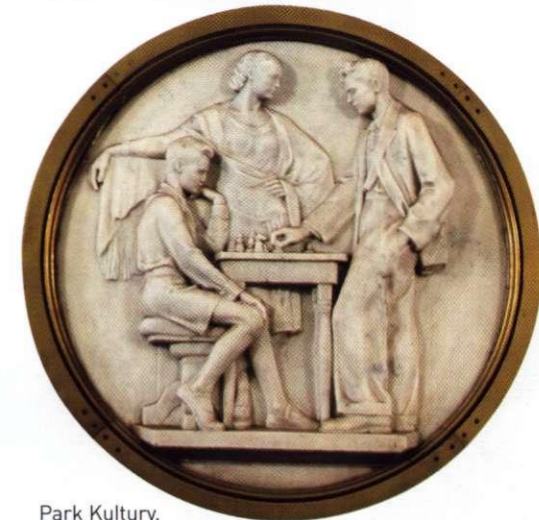
«Dances» – A sailor waltzes with a girl. He puts his arm round her waist but keeps a distance. A girl gracefully holds the lap of her dress with her finger tips. «Folk dances» – A man, sitting on a stump, plays accordion and two women sing and dance. «Skating rink» – A young boy and girl are evidently quite skilled in skating based on fancy poses they have stiffened. Pay attention to their dress – the girl's skirt and ribbons in her hair and the boy's baggy trousers put in spats. «Tennis» – A girl with a racket in her hand, a tennis-ball is at her legs. «Skiers» – A man and a woman have prepared for skiing. The man ties up his boot, while the woman waits for him. The long escalator serves for the transit to Station Park Kultury of the Sokolnicheskaya Line and exit to the city. It leads to the common ground entrance hall of both stations.



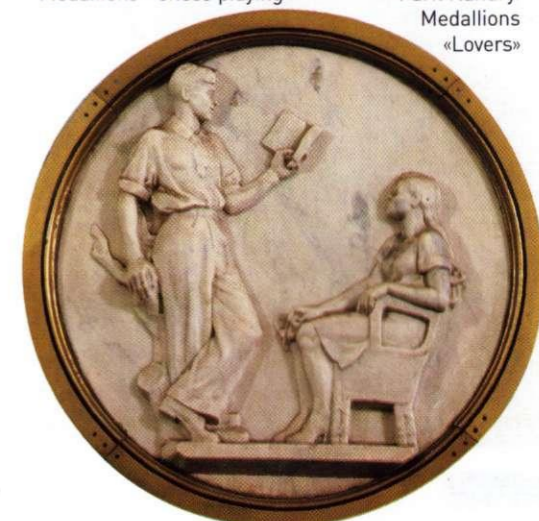
Park Kultury. Medallion «Ballerina»



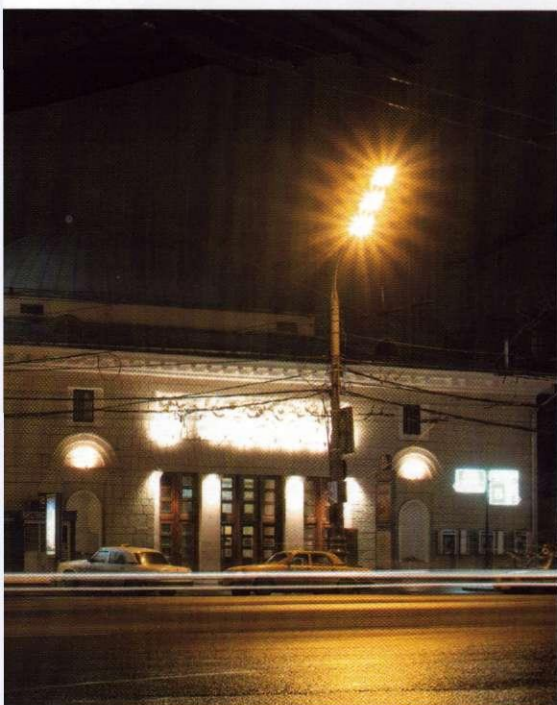
Park Kultury. Medallion «Skating rink»



Park Kultury. Medallions «Chess playing»



Park Kultury. Medallions «Lovers»



Park Kultury. Ground pavilion



Aviamotornaya.
Entrance to the under-
ground entrance hall

Aviamotornaya

Date of opening –
30th December 1979

**Construction
of the station –**
deep, column, three-span
**Architects of the under-
ground part –**

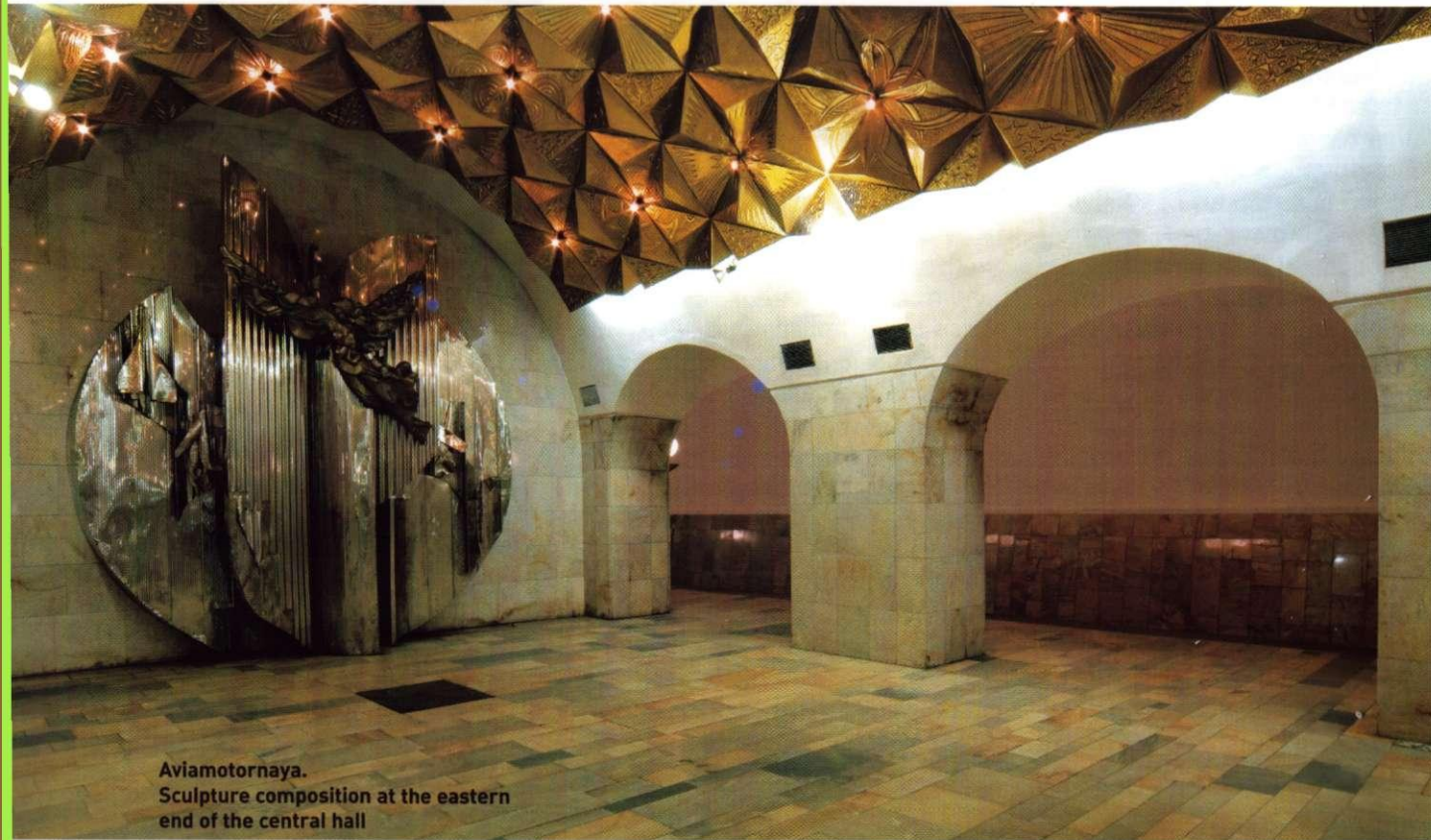
A. Strelkov, V. Klyukov,
N. Demchinsky
and Yu. Kolesnikova

**Authors
of the decoration –**
A. Mosiychuk and E. Rysin

The vaults of Aviamotornaya,
which are of different
height (the central vault is
higher than the platform one),
lean against the inclined walls

and arcades of the column,
slightly widening upward. The
decoration of the station is
mainly prominent of the abun-
dant of gold. The faceted sus-
pended ceiling is made of golden
metal pyramids with four paral-
lel lines of lamps, which look like
usual incandescent lamp, be-
tween them. The sides of the
pyramids are engraved with ab-
stract ornaments. The sconces
on the columns are also consist-
ed of three golden pyramids
fixed with the bases to walls

which hold lamps with matted
globe-shaped shades on their
sides. The eastern (blind) end
of the central hall is decorated
with a round composition. The
background is made of bright
silvery grooved metal sheets,
which imitate ascending air
currents raising a winged
woman to the sky. Vertical
take-off airplanes of different
times and propellers are near
her. Bright silvery propeller
vanes and «air» flowing
around are fixed above the
exit to the city.



Aviamotornaya.
Sculpture composition at the eastern
end of the central hall



Elektrozavodskaya.
Central hall

Elektrozavodskaya

Date of opening –
15th May 1944

**Construction
of the station –**
deep, pier, three-span
**Architects
of the underground part –**

V. Gelfreih, I. Rozhin in
collaboration with
P. Koplansky and L. Shagurina

The whole vault of the cen-
tral hall is covered with 300
round coffers. An ordinary
incandescent lamp is in each
coffer – Moscow Electric-bulb
Plant is located nearby.
The pylons are decorated with
white and greyish-yellowish
marble of the Prokhoro-Ba-
landinskoye Deposit. There are
marble high reliefs on the py-
lons just below the base of the
vault on the side of the central
hall. The topics of the relieves
are traditional of the Moscow
Metro, such as «Foundry»,



Elektrozavodskaya.
Arch of the escalator tunnel

«Forge shop», «Harvesting»,
«Vehicle assembling», «Tank as-
sembling», «Gun manufactur-
ing». However some sketches
are rare or even unique. The
left high relief of the first pylon
(starting from the western wall)
presents girls manufacturing
lamps. Workers manufacturing
insulators for transmission
lines are on the opposite pylon.
The right high relief of the first
pylon (starting from the exit)
presents girls and a pilot in-
stalling a propeller to an air-
plane. Opposite is a female
brigade headed by a

foreman, building road and lay-
ing asphalt. So the authors
wanted to immortalize the
labour feat of female workers
on the home front.
The chessboard of the floor is
made of grey marble and black
gabbro banded with pink-
yellow marble from the Crimean
Biyuk-Yankoy Deposit. The
edging contains a meander
made of black gabbro.
The walls are decorated with
bright red marble with numer-
ous intricate white inclusions
from the Georgian Saliety
Deposit.



Rimskaya

Date of opening –
28th December 1995

Construction of the station –
deep, column, three-span

Architects of the underground part –
L. Popov,
N. Rastegnyaeva, J. Imbrigi
and A. Quatroki

Transit to Station Ploshchad Iliicha

Two architects of Rimskaya (Russian for «Roman») are Italians. Hence there are used unusual for Moscow decorative elements, such as majolica sculptures. The stylized sculpture icon «Madonna with Baby» (sculptor L. Berlin, 1995) is placed above the arch of the escalator tunnel to station Ploshchad Iliicha. It stands in either an oval shell or half of an egg with sky-blue inner surface. The baby touches the mother's breast in some wonder. The prayer to Madonna is written by the outer edge of the egg – «SANTA MARIA MATER DEI ORA PRO NOBIS PEC-CATORIBUS NUNC ET IN HORA MORTIS NOSTRAE. AMEN». The opposite side of the same arch is adorned with the image of «Lips of Truth» made in the same style. Being truth, the features of the deity much differs from the original. The inscription by the outline of the majolica circle says – «ABUNDANS CAUELA NON NOCET PROBO NO PUBLICO». If going up by the escalator, one appears in the passageway whose walls are decorated with good-looking bright onyx-like marble with layers ranging from pure white to yellow-brown. Some surfaces faced with this stone are fringed with grey granite – effective technique making a strong impression. One more miniature is placed at the end of the passageway, above the entrance to Ploshchad Iliicha – pair of majolica angels are in the sky above the Arch of Titus from which a chariot drives out. The medallion has inscription «ANTE VICTORIA



Rimskaya.
Medallion «Capitoline wolf»



Rimskaya. Central hall

Rimskaya. Fountain
at the southern
end of the station



NE CANAS TRIUMERAM». The reduced copies of these three works are places above the arches facing station Ploshchad Iliicha. There is a true Roman corner in the opposite (southern) end of Rimskaya – niche edged with arc frieze with geometric Florentine mosaic is on a high stepped parapet of black gabbro. There is a fountain and a small fragment of a wall of true snow-white sparkling Carrara marble. The sculptural and architectural majolica assemblage is nearby – Romulus (looking at onlookers) and Remus sit on a collapsed Corinthian pillar (capital stands, shaft and base lie). L. Berlin managed to catch absolutely live expression of the founder of the Eternal City. From here the staircase and bridge across the platform lead to the escalator going upward. The Capitoline wolf suckling the twins is placed above the arch of the escalator on the side of the entrance to the station. The majolica sculptural group is also placed in an egg blue inside with inscription «URBS AETERNA. ROMULUS MARTIS FILIUS URBEM ROMAN CONDIDIT». The columns of Rimskaya are small, massive, and square with rounded edges and common entablatures, which support the vaults of different height. The walls partially continue the cylindrical surface of the vault. The columns and walls are faced with light marble of various kinds, and the cornice and entablatures are with plastic plates. The ceiling is very interested as well. It is covered with diagonal strips of various stones as against the standard Moscow canons – Volyn gabbro, light beige fine-grain granite from the Kashin Dvor Deposit, claret-coloured-red and grey-pink large-grain granite of the Vybirg Deposit, and dark grey with white (flying flakes) crystalline inclusions granite of the Mansurovskoye Deposit. The central hall is illuminated with oval niches located above the base of the vault in which lamps are hidden. The platforms are with small globe-shaped shades along the edges of the cornices.

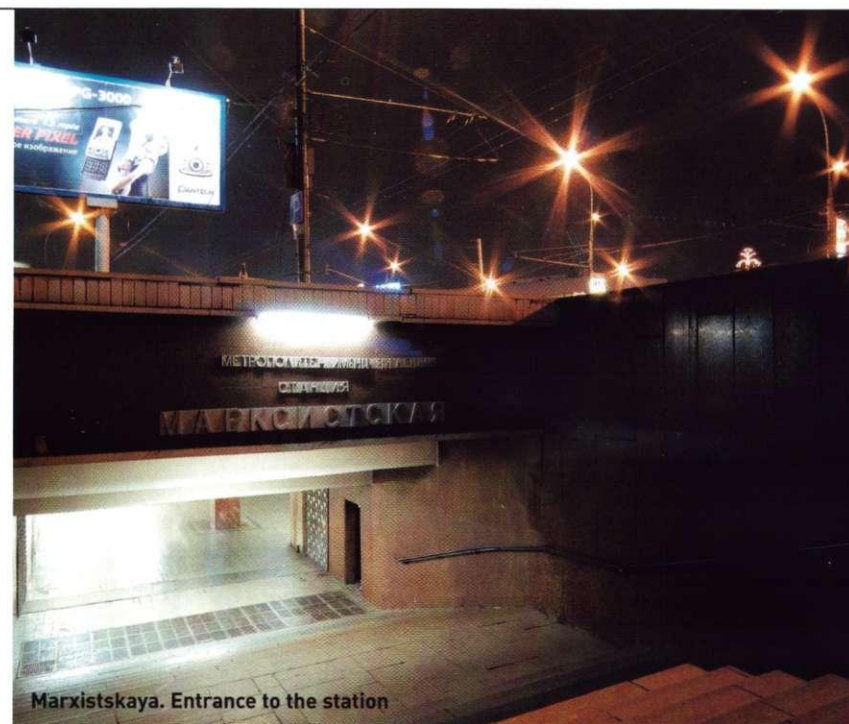


Marxistskaya

Date of opening –
30th December 1979

**Construction
of the station –**
deep, column, three-span

**Architects
of the underground part –**
N. Aleshina and V. Volovich
Transit to Stations
Taganskaya of the
Circle Line
and Tagansko-
Krasnopresnenskaya Line



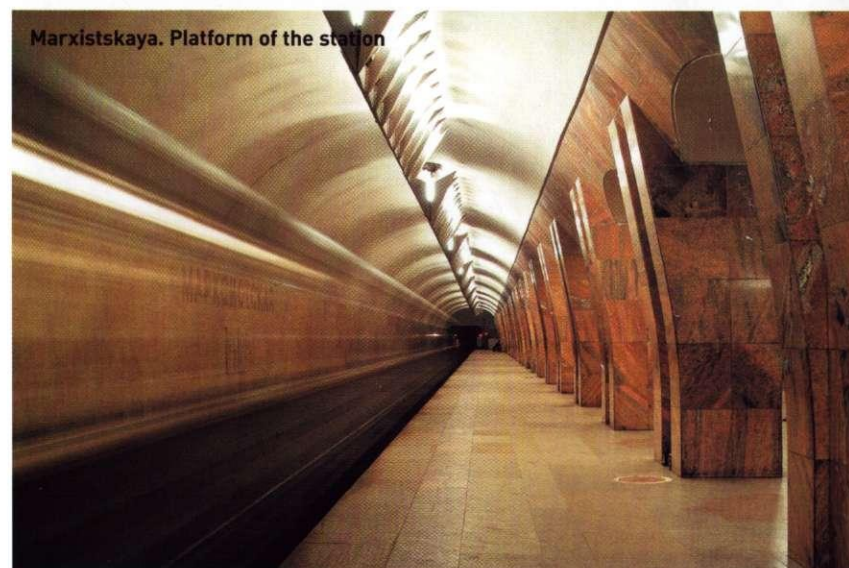
Marxistskaya. Entrance to the station

Marxistskaya is likely the reddest station of The Moscow Metro. The vaults lean against the arcades of elegant columns widening upward. The columns and entablatures are faced with red and pink marble with numerous many-coloured inclusions. The walls are faced with light marble, mostly of yellowish, cream-coloured, beige shades turning to white and greyish. This background is decorated with geometric mosaics of narrow arrow-shaped strips of red and pink marble. The lower part of the walls is faced with black gabbro. The central hall of the station is illuminated with original helical chandeliers.

The floor is covered with dark grey granite with large white crystalline inclusions. There are eight-pointed stars of red granite between the columns on the floor and two of red granite of two different shades inscribed one in other along the central hall.



Marxistskaya. Central hall



Marxistskaya. Platform of the station



Chkalovskaya

Date of opening –
28th December 1995

**Construction
of the station –**
deep, pier, three-span

**Architects
of the underground part –**
N. Aleshina, L. Borzenkov,
A. Vigdorov, N. Samoylova
and M. Chistyakova

Authors of decoration –
M. Alekseyev and
L. Novikova

**Transit to Stations Kurskaya
of the Circle Line
and Arbatsko-Pokrovskaya
Line**

The part of the Garden Ring was named Ulitsa Chkalovskaya in 1938-1990 (now Ulitsa Zemlyanoy Val). The legendary pilot V. Chkalov

dwelled in one of its buildings. Hence, it is natural that station Chkalovskaya is devoted to the transpolar flights of the 1930's. Its decoration clearly means «back to the future». The pylons of elegant smooth lines slightly widen upward and gradually go into the vault. The vault of the central hall is obviously higher than those of the platforms. It has a semi-oval cross-section rather than usual semicircular. The pylons are faced with marble of two kinds, elegantly matched by colour. There is bright bluish-grey and white streaky Ufaley marble on the side of the central hall and platforms, while inside the passes it sets off vertical inserts of cloud-white Koelga marble. The upper parts of the interpylon passes are decorated with smooth rectangular and wavy strips of Ufaley marble. The walls are faced with cloud-white marble, and the socle is with grey granite. The

floor is covered with white granite. It is decorated with squares of red marble in the central hall, and white squares set off black and red granite. The station is illuminated with original lamps. The light belts stretch out from the middle of one pylon to the middle of the opposite one. They are covered with matted translucent milk-coloured gutters. On the platforms they rise to the axis of the vaults. There are mysterious metal inserts (two concentric pressed in ovals) at the bases of the belts, which answer the general cold strictness of the decoration. The unusual lamps and general style of the station make a passenger feel itself within a large underground airship. Two simple small raised panels are placed in the oval niches above the passageways in both ends of the central hall – the Earth's polar cap by day (northern end) and at night (southern end).



Prazhskaya. Central hall

Prazhskaya

Date of opening –
6th November 1985

Construction of the station –
shallow, column, three-span
Architects of the underground part –
E. Kyllar, Z. Holupa,
V. Bruskova and V. Cheremin

Typical shallow station, the quietest station of the Moscow Metro. The low lev-

el of noise is controlled by noise-suppressing panels (perforated) used for facing the ceiling and raised tiles for the walls. The decoration of Prazhskaya contrasts with other stations of the Moscow Metro. First, it is a very dark station. The columns rectangular in cross-section with rounded edges are faced with dark metal panels of brown-yellow colour. The walls are faced with non-glazed brown ceramic tiles. The ceiling above the tracks is painted black. It is interesting that the low suspend-

ed ceiling of the central hall made of square «perforated» panels is white, but even this does not change the general gloomy atmosphere of the station.

A large sculpture of flying pigeon made of yellowish Bohemian glass is placed near the outer wall of the cash hall of the northern entrance hall. The opposite (southern) entrance hall is decorated with the panorama of Prazsky Hrad (modelling of raw ceramic paste) on the wall.

Bulvar Dmitriya Donskogo

Date of opening –

1st December 2002, known as Kachalovo in the project

Construction

of the station –

shallow, column, three-span

Architects

of the underground part –

V. Filippov, S. Belyakova
and S. Petrosyan

Transition to station Ulitsa Starokachalovskaya of the Butovskaya Line light metro.

Bulvar Dmitriya Donskogo is a smaller copy of Komso-molskaya of the Sokolnicheskaya Line. The pedestrian galleries run above the tracks along the walls throughout the whole station. They are located at the same level as the inner entrance halls and are connected with the bridge in the middle. Two staircases connect the bridge with the station.

The station is decorated with light Koelgy marble and grey-pink Vyborg granite on the walls. The walls of the galleries are faced with streaky sugar-white to honey-brown marble. The columns are decorated with original green marble. The hand-rails of the galleries are made of stainless steel. It is also used in the bases of the guides placed along the main axis of the central hall. The lampshades of the torchieres and sconces in the galleries are milk-white spheres as if carried here from stations of the first phase of the Moscow Metro.



Bulvar Dmitriya Donskogo. Platform of the station



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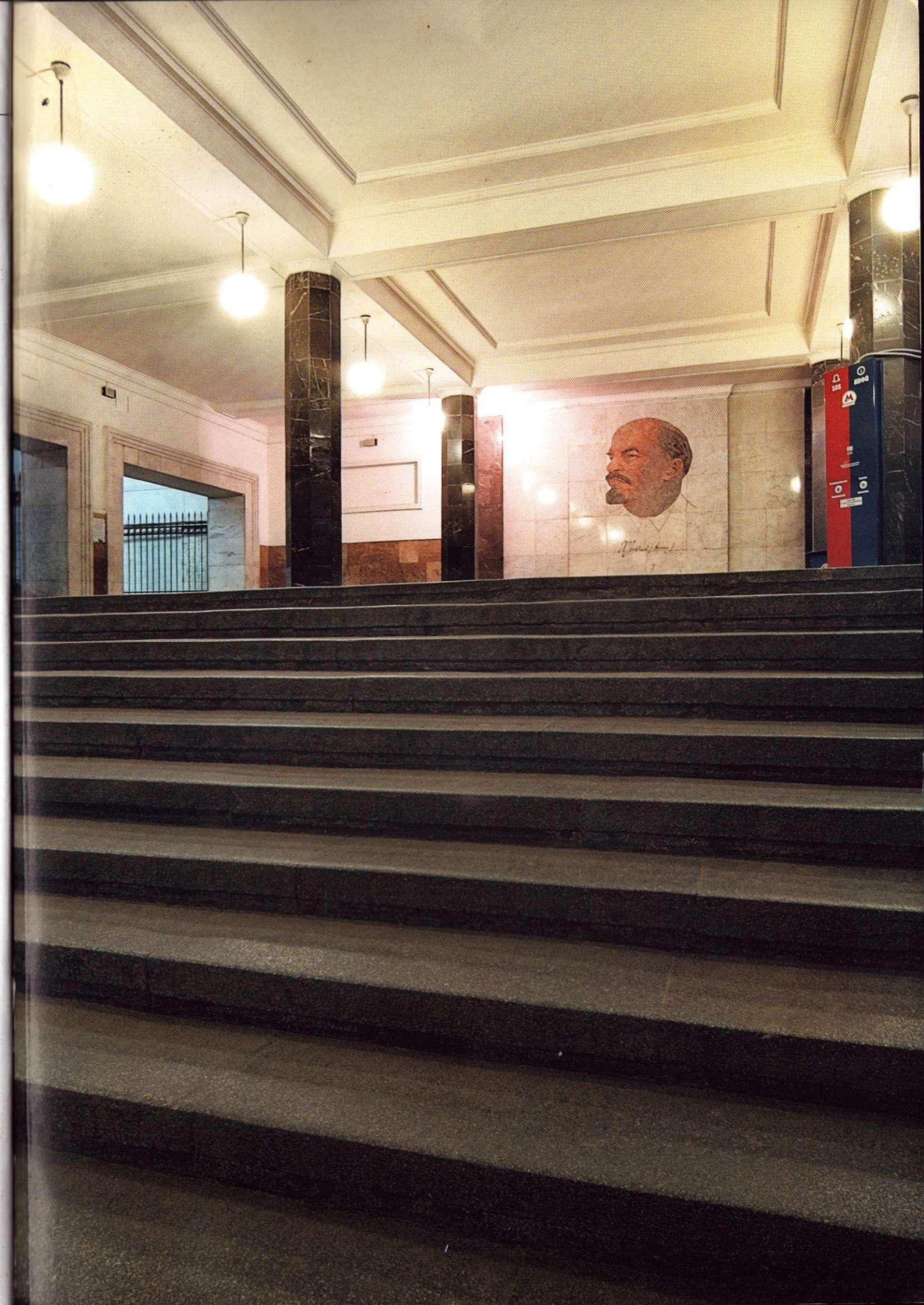


СХЕМА ЛИНИЙ СКОРОСТНОГО ТРАНСПОРТА МОСКВЫ

RAPID TRANSIT SYSTEMS OF MOSCOW

