ZUE S.A.

ZUE S.A.

ZUE Group is a major player in the rail construction, urban rail infrastructure and power sector. The Group comprises design, trade and production and contracting companies.

ZUE Group focuses on design and development services as a general contractor for comprehensive tram and railway lines construction and upgrade projects, along with the ancillary infrastructure (e.g. earthworks and railway substructure, drainage systems and civil structure and building development, including railway stations).

ZUE S.A. has a leading position in the development and upgrade of tram infrastructure power supply systems and the development and upgrade of tram and railway OCL networks. As part of its core business, the company provides maintenance services for the city infrastructure systems; i.e. tracks and OCL, power supply systems and street lighting. ZUE S.A. also provides professional power networks development services.

Comprehensive design documentation for the transport infrastructure sector and high voltage networks is prepared by Biuro Projektów Komunikacyjnych w Poznaniu Sp. z o.o.

Trade and production activities at the Group are conducted by Railway gft Polska Sp. z o.o. The company was acquired in April 2015 and continues the activities conducted by ThyssenKrupp GfT Polska.

URBAN INFRASTRUCTURE

EXTENSION OF KST TRAMWAY LINE, STAGE II B, TOGETHER WITH ROADWORKS (LIPSKA – WIELICKA STREETS) IN CRACOW

Investor:
Mota Engil Central Europe S.A.

Contractor: **ZUE S.A.**
Contract period: **12.02.2014 – 15.08.2015**
Gross contract value: **PLN 32 779 500,00**

Contract aim:
The aim of the undertaking was to convert the existing track section in Wielicka and Lipska/Kuklińskiego streets as well as to construct a new line (link) between Wielicka and Lipska streets along five bridge-type structures (retaining walls, viaduct, overpass).

Contract specification:
Track works:
– embedded rail system (ERS) rails on bridge-type structures – 2,272 metres of single track
– tracks using continuous grouting (757 metres of single track) and point grouting (1,354 metres of single track) technology
– classic technology tracks with resilient rail fastening on a ballast bed (41 metres of single track), with rubber-coated rails (168 metres of single track)
– turnout mounting (in non-ballasted structures) – 6 complete sets
– lubricator mounting – 6 complete sets
– mounting of WS 90E controllers from ZUE S.A. for controlling and heating switches – 6 complete sets

Traction network:
– chain traction network for bridge-type structures – 4,200 metres
– flat traction network over turnouts – 2,300 metres

Lighting:
– laying of YAKXs 5x35 ground cables arranged in traditional fashion
– laying cables along bridge-type structures and YKY 5x15 ramps
– laying cables along YKYFtyn 5x16 overpass

"Dworcowa" substation
– "Dworcowa" substation facility with a volume of 374 m^3
– medium voltage switchgear and direct current traction switchgear
– traction rectifier unit – 2 complete sets
– cabinets: telemechanics switch cabinet, local and remote control cabinets
- UPS DC C&T ELMECH Sp. z o.o. powerhouse

"Bieżanowska" substation
– replacement of 15kV medium voltage switchgear with schematic representation in the Power System Control Room.

MODERNISATION OF TRAMWAY TRACK ON GLIWICKA STREET FROM THE „LISA" TRAM STOP TO THE BOUNDARIES OF KATOWICE WITH CHORZÓW. MODERNISATION OF TRAMWAY TRACK ON THE TRAM PASS ON BRACKA STREET

Investor:
Tramwaje Śląskie S.A., Katowice City

Contractor: **ZUE S.A.**
Contract period: **29.11.2013 – 01.07.2015**
Gross contract value: **PLN 17 610 104,94**

Contract aim:
The aim of the project was the modernisation of the tram line which would enable the creation of an efficient and reliable system of people transportation as part of the Katowice and Upper Silesian Industrial Region public transport.

Contract specification:
Rail works:
– construction of tramway track in the floating track technology – 67.115 m of single track.
– construction of tramway crossings in the floating track technology – 348 m
- „CBP" tramway slabs for tramway passes – 124 m²
– construction of tramway track in the ballast (classic) technology – 3,144.38 m
– laying the tram slabs – 86 pcs.
– construction of the stop platforms (4 pcs.) with the area of 600 m²
– assembly of the platform shelters – 4 pcs.
– track drainage (installation of the draining boxes) – 8 pcs.
– assembly of the alignment equipment from the tramway tracks – 4 sets
– inter-track connections – 24 pcs.
– thermite welding – 358 pcs.

Overhead lines:
– setting of traction posts – 44 pcs
– installation of the contact wires – 3,426.36 m

Roadworks:
– bituminous pavement – 1665 m²
– the surface of the paving – 49.78 m²
– road barrier – 65.3 m
– reconstruction of the fence – 151.4 m

Electrical works:
– teletechnical ducting system in the pipes Ø40 (63.88 m), Ø110 (31.94 m)
– arrangement of signalling cables in pipes DVK Ø110 (338.76 m), SRS Ø75 (35.9 m), SRS Ø110 (278.58 m)

CONSTRUCTION OF THE TRAM DEPOT IN FRANOWO IN POZNAŃ

Investor:
Miejskie Przedsiębiorstwo Komunikacyjne w Poznaniu Spółka z o.o.

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **13.07.2011 – 10.06.2015**
Gross contract value: **PLN 319 464 585,06**

Contract aim:
The aim of this project was the construction of the biggest (17 ha) and most modern tram depot in Poland, the first that is managed automatically and the one of the most modern depots in Europe, which would ultimately service 150 trams.

Contract specification:
Roadworks:
– construction of the depot from asphalt concrete – 17,858 m²
– construction of the manoeuvre area from concrete cobblestone (19,626 m²), holding stations (4,618 m²), sidewalks (3,110 m²)

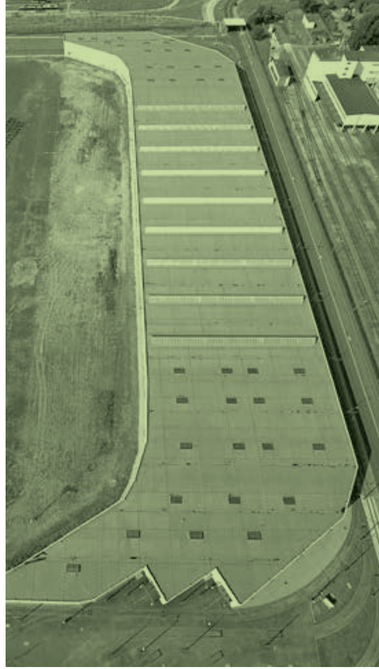
Railway works:
– assembly of the tramway track using the continuous grouting technology (5,615 mm of single track), point grouting technology (110 m of single track)
– assembly of the tramway track using the ERS-M technology – 3,040 m of single track
– assembly of the tramway track on "Molla" boards – 1,718 m of single track
– assembly of the tramway track on pre-tension concrete sleepers (291 m of single track), wooden sleepers (321.0 m of single track)
– tramway track assembly on the so-called shelf – 674 m of single track
– tramway track assembly in the channel (so-called „floating rail") – 588 m of single track
– tramway track assembly on posts – 405 m of single track
– assembly of railroad switches – 89 pcs
– assembly of railway turntables – 7 pcs

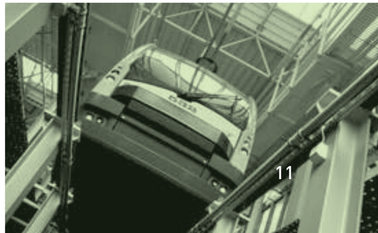
Overhead lines:
– assembly of posts – 253 pcs
– assembly of flat overhead lines – 8,030 running metres
– assembly of rigid overhead lines in the main hall (1,080 running metres), holding station (4,560 running metres)

Automation:
– adapting the depot tools for the assembly of the Depot Management System (DMS) for automatic management of the depot

3D works:
– construction of traction substation
– construction of holding station
– construction of the main hall with office and employee facilities – 17,776 m²
– construction of the warehouse hall with a garage for the rolling stock
– construction of a workshop with office and employee facilities

Small architecture:
– greenery – 51,278 m²





CONSTRUCTION OF THE TRAMWAY LINE FOR TARCHOMIN

Investor:
Tramwaje Warszawskie Sp. z o.o.

Contractor: **ZUE S.A.**
Contract period: **28.02.2014 – 20.05.2015**
Gross contract value: **PLN 63 674 058,64**

Contract aim:
The aim of the project was the construction of a new tram line which would enable the connection between the most intensively expanding area of Warsaw (Tachomin-Nowodwory housing estate complex) and the city centre.

Contract specification:
Rail works:
– construction of tramway track in the "green track" technology together with a turning loop with the total length of 4,462 m of single track
– assembly of railroad switches together with heating and control of axel swivels

Overhead lines:
– construction overhead lines - 6,006 m of single track
– assembly of traction posts – 94 pcs

3D works:
– construction of "Ćmielowska" rectifier substation with equipment

Roadworks:
– modernisation and reconstruction of the intersections of the Światowida street with a total area of – 27,488 m² along with street and traffic lights

Collision removal and the construction of new sections:
– removal of the RWE collision and laying the new low-voltage lines (335 m), medium-voltage lines (4,994 m)
– reconstruction of the water supply network – 488 m
– reconstruction of the gas network – 395 m
– reconstruction of the heat distribution network – 1,044 m
– reconstruction of the sewage collection network – 1,580 m
– control cable lines – 2,461 m
– reconstruction of the copper telecommunication cables – 932 m
– reconstruction of the fibre optic cables – 1,630 m

MODERNISATION OF THE DEDICATED TRAMWAY TRACK FOR LINES 15, 21, 24 AND 27 ON 3 MAJA AND CWK STREET IN SOSNOWIEC WITH PLATFORMS. MODERNISATION OF CROSSINGS IN SOSNOWIEC: 3 MAJA STREET, CROSSING WITH PARKOWA AND MOŚCICKIEGO STREETS (TASK NO. 28). MODERNISATION OF THE TRAMWAY LINE IN SOSNOWIEC ON THE 3 MAJA STREET, FROM CWK TO ZAGÓRZE TURNING LOOP (TASK NO. 29)

Investor:
Tramwaje Śląskie S.A.

Contractor: **ZUE S.A.**
Contract period: **25.01.2013 – 30.04.2015**
Gross contract value: **PLN 37 005 285,42**

Contract specification:
Rail works:
– deconstruction works of the track (7,420 m of single track), on the prefabricated slabs (61 m of single track), on wooden sleepers (359.78 m of single track), single single-track railroad switches (2 sets), alignment equipment (8 pcs.)
– construction of classic tracks (130.06 m of single track), in the Rheda City Grun system with a point support (4,937.63 m of single track), in the Rheda City Classic system with a continuous support (2,212.94 m of single track), on the slab with a point grouting (43 m of single track) with a continuous grouting (138.71 m of single track), in the system of the rail continuous fixing (111.34 m of single track) on prestressed concrete sleepers (260.68 m of single track), from VRZ slabs with the mould compound rails fixing (151.89 m of single track)
– laying the single single-track railroad switches (2 sets), single double-track (2 sets)
– designing the control switches control and heating with the drive assembly – 1 set
Roadworks:
– asphalt concrete pavements (834.79 m2), bituminous (116.47 m^2) of concrete block (1,482.01 m^2)
– EPT slabs in the double track – 25.51 linear metres
– construction of two concrete block platforms with an area of 482.04 m^2, installation of 14 shelters.
– small architecture: ekokrata (eco-grid) (1,513.24 m^2), lawns (13,411.39 m^2)
Drainage works:
– PVC-u drain Ø160 – 221.21 m
– PP SN8 tubes Ø160 (2 442.90 m), Ø200 (2 637.54 m), Ø250 (545.51 m), Ø315 (359.65 m) drain-collector
– PVC-U SN8 tubes Ø110 (665.81 m), Ø200 (97.90 m), Ø250 (40.32 m), Ø315 (236.03 m) collectors
– reinforced concrete wells Ø1000 (76 pcs.), Ø800 (4 pcs.) plastic wells Ø600 (48 pcs.), Ø425 (63 pcs.)
Electrical works:
– securing the existing power cables: low voltage (296 m), medium voltage (32.5 m), securing gas networks (46.4 m)

CONSTRUCTION OF THE TRAM ROUTE OF THE POZNAŃ FAST TRAM (PST) TO THE WESTERN STATION IN POZNAŃ

Investor:
The City of Poznań represented by Zarząd Transportu Miejskiego in Poznań

Contractor: **ZUE S.A.**
Contract period: **30.08.2011 – 30.08.2013**
Gross contract value: **PLN 131 068 222**

Contract aim:
The aim of the project was the construction of a new section of the PST route to the Western Station as part of expanding the Poznań Fast Tram project

Contract specification:
Railway works:
– construction of the new tram route (ballast-free and with track ballast) – 4,490 m
– assembly of railroad switches (ballast-free and with track ballast) – 12 sets
– assembly of lubrication systems – 6 pcs

Overhead lines:
– assembly of overhead lines – 4,200 running metres
- controlling and heating of axel swivels

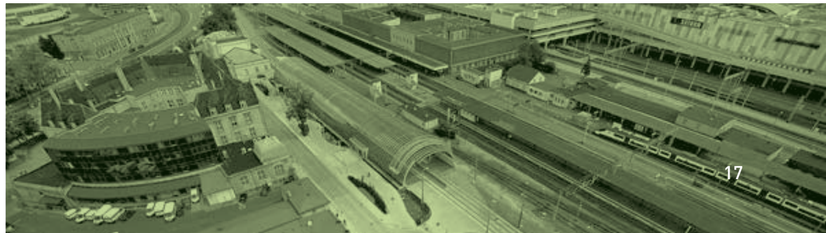
Roadworks:
– renovation of Zachodnia street – sidewalks and carriageway made from paving bricks
– construction of the service road from concrete cobblestone
– vertical and horizontal signs
– reconstruction of street lighting
– reconstruction of storm water drainage

3D works:
– construction of steel shelters on tram stops with glass topping with the total area of 2,740 m²
– delivery and assembly of elevators – 4 pcs
– delivery and assembly of escalators – 6 pcs

Engineering works:
– construction of the underground passage with sanitary facilities at the PST stop of the Western Station with the area of 1,006 m²

Drainage works:
– construction of reservoirs and pumping stations

Passenger information systems
Greenery



CONSTRUCTION OF THE TRAM ROUTE FROM THE CITY CENTRE TO THE BYDGOSZCZ GŁÓWNA TRAIN STATION WITH EXPANSION OF THE FOLLOWING STREETS: MARSZAŁKA FOCHA, NARUSZEWICZA, DWORCOWA AND ZYGMUNTA AUGUSTA IN BYDGOSZCZ

Investor:
Zarzad Dróg Miejskich i Komunikacji Publicznej in Bydgoszcz

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **23.08.2010 – 23.11.2012**
Gross contract value: **PLN 70 344 877,34**

Contract aim:
he aim of the project was the construction of a new tram line with the bridge route connecting the Bydgoszcz Główna railway station with the city centre.

Contract specification:
Railway works:
– assembly of the tramway track – 4,650.15 metres of single track
– assembly of two way single railroad switches – 3 sets, one way single road switches – 4 sets
– assembly of the alignment equipment – 15 sets

Roadworks:
– bituminous road surface – 26,587 m^2
– bicycle lanes from asphalt concrete – 2,540.4 m^2
– sidewalks from concrete cobblestone and granite flagstones
– vertical and horizontal signs, road safety equipment
– tubular fencing (4.8 m) and mesh panels (585.85 m)
– assembly of „Błonie" posts (173 pcs) and U-12c bollards (3 pcs)
– assembly of shelters on tram stops (37 pcs) and for bicycles (1 pc)
– reconstruction of street lighting
– reconstruction of water supply network and sanitary sewers
– assembly of traffic lights

Overhead lines:
– assembly of overhead lines – 4,848 running metres.
– controlling and heating of railroad switches

3D works:
– construction of „Naruszewicza" traction substation
– construction of the MZK control room at the tram and bus turning loop Zygmunta Augusta/Rycerska

Engineering works:
– construction of the cable-stayed bridge at the Brda river
– construction of retaining walls

Intelligent transportation systems
Greenery

CONSTRUCTION OF THE TRAM ROUTE OS. LECHA-FRANOWO IN POZNAŃ

Investor:
Infrastruktura Euro Poznań 2012 Sp. z o.o.

Contractor: **ZUE S.A. – Consortium Partner**
Contract period: **01.04.2011 – 30.07.2012**
Gross contract value: **PLN 224 983 160,35**

Contract aim:
The aim of the project was the construction of a tram route (partially in a tunnel) from the tram loop on Lech housing estate to Franowo housing estate as part of the development of Poznań infrastructure before the EURO 2012.

Contract specification:
Railway works:
– construction of 2,680 m of single track of tramway track in the tunnel using the ERS-M technology.
– construction of tramway track in the technology of continuous grouting (2 340 m of single track), point grouting (660 m of single track), classical tramway track (150 m of single track)
– assembly of two way single railroad switches (2+6) – 6 sets
– assembly of one way single railroad switches (1+1) – 8 sets
– linear drainage – 1,900 rm.

Engineering works:
– construction of 1,067 m of the two-bay tram tunnel (5 x 10.4 m)
– construction of sheltered tram stops below ground level – 2 sets
– assembly of elevators – 4 pcs

Overhead lines:
– assembly of rigid overhead lines in the tunnel – 2,050 m of single track
– assembly of multiple lines (2,460 m of single track), flat lines (2,200 m of single track)
– assembly of the overhead lines power supply and railroad switches control

3D works:
– construction of „Rataje" rectifier substation with equipment
– construction of employee facilities

Roadworks:
– construction of district and local roads from asphalt concrete (17,918 m²) and paving bricks (9,846 m²)

Telecommunication systems
Tunnel de-smoking
Control and supervision systems in the tunnel
Electrical grid
Reconstruction of the gas networks

Sanitary installations
– reconstruction of district heating 2 x dn800
– reconstruction of water mains dn1000
– reconstruction of sanitary sewer network

CONSTRUCTION OF THE TRAM ROUTE BETWEEN BROŻKA STREET AND THE JAGIELLONIAN UNIVERSITY CAMPUS IN CRACOW TOGETHER WITH THE TRAFFIC CONTROL AND SUPERVISION SYSTEM

Investor:
Zarząd Infrastruktury Komunalnej i Transportu in Kraków

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **18.11.2010 – 18.11.2012**
Gross contract value: **PLN 159 646 430,06**

Contract specification:
Railway works:
– construction of tramway track with the turning loop – 8,016.56 m of single track (on an in-situ cast slab from reinforced concrete – 4,049.66 m of single track, on a prefabricated slab from reinforced concrete – 332,50 m of single track, on longitudinal prefabricated MOLL beams with natural grass (3,397.32 m of single track) and platforms (12 pcs)
– construction of railroad switches (single two way – 3 sets, single one way – 4 sets) together with heating and controlling
Roadworks:
– construction of the line of streets class G and Z with the length of 4,482 km and the SMA surface SMA – 75,546.58 m^2
– construction of P&R parking from paving bricks – 7,226.6 m^2
– construction of sidewalks (22,839 m^2) and bicycle lanes (15,690 m^2)
Engineering structures:
– construction of noise barriers – 19,961.15 m^2
– construction of retaining walls – 511.5 m
3D works:
– construction of tram stop – 866.70 m^3
– construction of the gate house
– construction of Zaborze traction substation
– construction of Ruczaj traction substation
Electrical works:
– reconstruction of electrical grid WN - 110kV – 1,892 m
– reconstruction of electrical grid SN – 54,461 m
– reconstruction of electrical grid NN – 934 m
Overhead lines:
– assembly of overhead lines – 6,740 km
– assembly of traction posts – 157 pcs
Sewage system:
– reconstruction of sanitary sewage network – 19.08 m
– reconstruction and construction of storm water drainage – 4,581.46 m
– reconstruction of combined sewer system – 466.57 m
Telecommunication network:
– construction of cable ducting system – 79,115 m
– routing of fiber-optic cables – 43,467.5 m
Water supply network:
– reconstruction of the water supply network – 2,522.95 m
Gas network:
– reconstruction of the gas network – 1,194.63 m
Heat distribution network:
– reconstruction of the heat distribution network – 2,159 m
Ligthing:
– assembly of lighting posts –71 pcs
Small architecture:
– greenery – 52,000 m^2

CONSTRUCTION OF THE TRAM ROUTE KST N-S STAGE IIA: GRZEGÓRZECKIE ROUNDABOUT – KOTLARSKI BRIDGE – KLIMECKIEGO – LIPSKA STREET TOGETHER WITH RECONSTRUCTION OF THE RIGHT-OF-WAY AND CONSTRUCTION OF KUKLIŃSKIEGO STREET AND A TRESTLE BRIDGE OF NOWOHUCKA STREET – POWSTAŃCÓW WIELKOPOLSKICH STREET IN CRACOW

Investor:
Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Kraków

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **21.01.2010 – 30.06.2011**
Gross contract value: **PLN 165 939 991,47**

Contract aim:
The aim of the project was the construction of a new section of a tram line from Rondo Grzegórzeckiego to the Nowy Płaszów loop as part of the Kraków Fast Tram, with the construction of a trestle bridge and the road system.

Contract specification:
Railway works:
– construction of tramway track in the "green track" technology together with a turning loop with the length of 8,032 m of single track
– assembly of railroad switches together with heating and control of axel swivels

Overhead lines:
– construction of 8,032 m of single track overhead lines

3D works:
– construction of "Szklarska" rectifier substation with equipment

Road works:
– reconstruction and construction of the line of streets class G with the length of 4,235 km together with street lighting and traffic lights
– construction of 117 m of trestle bridge
– construction of noise barriers
– reconstruction and construction of storm water drainage
– reconstruction of water supply network together with the construction of the fire-fighting water tank
– reconstruction of heat distribution network together with the construction of man-accessible and non-accessible sewers
– reconstruction of gas network
– removing of collisions
– medium and low voltage cable lines

Assembly of the passenger information system

RECONSTRUCTION OF FRANCISZKAŃSKA AND DOMINIKAŃSKA STREETS IN CRACOW TOGETHER WITH THE TRAMWAY TRACK

Investor:
Zarząd Infrastruktury Komunalnej i Transportu in Kraków

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **07.07.2010 – 30.11.2010**
Gross contract value: **PLN 21 161 458,00**

Contract aim:
The aim of the project was the reconstruction of one of the major tram routes in the historical centre of Cracow close to the Main Square.

Contract specification:
Railway works:
– assembly of tramway track together with the road – 3,420 running metres
– assembly of single two way railroad switches (2+6) – 3 sets
– assembly of axel swivel control and heating system

Overhead lines:
– assembly of overhead lines

Roadworks:
– surfaces from poured asphalt (3,116.76 m²),
and cobblestone (1,021.96 m²)
– construction of tram stops
– drainage

Assembly of the passenger information system
Elements of small architecture

DESIGN, RENOVATION AND EXPANSION OF A W-Z TRAM ROUTE IN WARSAW. STAGE II: SECTION SOLIDARNOŚCI ALLEY – FROM JANA PAWŁA II ALLEY TO THE INTERSECTION WITH JAGIELLOŃSKA STREET IN WARSAW AND MARSZAŁKOWSKA STREET – FROM SENATORSKA STREET TO BANKOWY HUB

Investor:
Tramwaje Warszawskie Sp. z o.o.

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **08.01.2009 – 31.10.2009**
Gross contract value:
PLN 78 533 717,99

This project was awarded
the 3rd Degree Prize in the Construction
of the Year Competition 2009

Contract aim:
The aim of the project was the modernisation of one of the most important Warsaw tram lines running through the city centre.

Contract specification:
Design:
– design documentation together with all approvals

Railway works:
– assembly of ballast-free tramway track from asphalt – 6,400 m of single track
– assembly of ballast-free railroad switches from asphalt (single two way (2+6) – 2 sets, single double-sided two way (4+16) – 1 set), track junctions (0+16) – 1 set

Overhead lines:
– renovation of overhead lines – 6,690 m of single track

Roadworks:
– renovation of two tram stops
– renovation of four tram and bus stops
– construction and renovation of traffic lights on four intersections
– renovation of the "Pancera" overpass
– reconstruction of the road network together with the construction of the common tram and bus lane

DESIGN, RENOVATION AND EXPANSION OF THE W-Z TRAM ROUTE IN WARSAW, STAGE I – WOLSKA STREET AND SOLIDARNOŚCI ALLEY SECTION FROM THE WOLA CEMETERY LOOP TO THE INTERSECTION WITH JANA PAWŁA II STREET IN WARSAW

Investor:
Tramwaje Warszawskie Sp. z o.o.

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **09.05.2008 – 30.10.2009**
Gross contract value: **PLN 77 957 998,78**

Contract aim:
The aim of the project was the modernisation of one of the most important Warsaw tram lines running through the city centre.

Contract specification:
Design:
– design documentation together with all approvals

Railway works:
– assembly of tracks in the ERS-M system (2,608 m of single track) and on pre-tensioned sleepers (821 m of single track)
– assembly of railroad switches in the continuous grouting technology – 2,525 m of single track, including assembly of the following switches:
– single with one track (1+1) – 6 sets
– double with two tracks (4+16) – 7 sets
– single with two tracks (2+6) – 2 sets
– single incomplete with two tracks (1+5) – 3 sets
– double incomplete with two tracks (3+15) – 1 set
– track junctions (0+16) – 2 sets
– track junctions (0+8) – 1 set
– placing of non-woven geotextile fabric (3 825 m^2) and SEDRAPUR vibroinsulation mats (13,550 m^2),
– renovation and expansion of 26 tram stops

Overhead lines:
– assembly of tram overhead lines – 11,550 running metres
– assembly of traction posts – 45 pcs.

CONSTRUCTION AND DESIGN OF THE FAST TRAM ROUTE IN THE EXISTING TUNNEL BETWEEN THE MOGILSKE ROUNDABOUT AND PAWIA STREET IN CRACOW

This project was awarded the 1st Degree Prize in the Construction of the Year Competition 2008

Investor:
City of Cracow represented by Agencja Rozwoju Miasta SA

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **17.07.2007 – 11.12.2008**
Gross contract value: **PLN 164 648 591,01**

Contract aim:
The aim of this project was the construction of the first in Poland tram route in a tunnel.

Contract specification:
– design documentation together with all approvals
– construction of tramway track in the tunnel in the "floating rail" technology – track construction from concrete box – 2,828 m of single track.
– construction of tramway track on the entry to the tunnel from Ri60N tracks on concrete slabs – 252 m of single track
– assembly of overhead lines in the tunnel – 3,790 running metres of contact wire DjpS 100
– traction wires N2XCH 1x500/25 – 5,800 running metres
– control cable N2XH 1x500/25 – 1,585 running metres
– construction of two underground stops: "Politechnika" and "Dworzec Główny"
– construction of the underground traction substation "Dworzec Główny"
- construction works and tunnel architecture
– assembly of accessories (elevators – 6 pcs, escalators – 14 pcs, and ramps for the disabled)
– de-smoking and ventilation systems
– assembly of lighting together with wiring – over 2,300 pcs of fixtures
– assembly of tram traffic lights, including a modern system of counting axes ACS 2000
– assembly of Fire Detection System AlgoRex Sinteso – 345 elements
– assembly of the SCADA system supervising the technical condition of equipment and operational system processes
– assembly of the linear Fire Detection System Fibrolaser II – 3,800 m
– assembly of the visualisation system MM800 for fire and TV systems
– assembly of CEPIS CCTV
– assembly of Emergency Telephone System

MUNICIPAL TRANSPORT IN CRACOW – FAST TRAM INFRASTRUCTURE (RECONSTRUCTION OF THE MOGILSKIE ROUNDABOUT, RECONSTRUCTION OF POWSTANIA WARSZAWSKIEGO ALLEY, RECONSTRUCTION OF THE TRAM TURNING LOOP AT KAMIENNA STREET, RECONSTRUCTION OF GROUND SECTION OF THE FAST TRAM FROM THE TECHNICAL UNIVERSITY TO THE TRAM TURNING LOOP AT KAMIENNA STREET, RECONSTRUCTION OF THE GRZEGÓRZECKIE ROUNDABOUT)

Investor:
Budimex S.A.

Contractor: **ZUE S.A.**
Contract period: **01.09.2006 – 30.06.2008**
Gross contract value: **PLN 66 602 587,82**

Contract specification:
Design:
- design, construction and technological documentation for the scope of works performed

Railway works:
– construction of tramway track on slabs from reinforced concrete in the point grouting technology (1,030 m of single track) and continuous grouting (5,106 m of single track)
– construction of tramway track on pre-tension concrete sleepers – 2,351 m of single track
– construction of tramway track in the "green tacks" technology – 630 m of single track
– assembly of drives for axel swivels together with control and heating – 40 sets
– assembly of railroad switches – 1,422 m of single track

Overhead lines:
– placing of traction posts – 155 pcs
– assembly of contact wires – 8,169 m

Roadworks:
– road surface from hard gussasphalt – 12,016 m²
– stop platforms from granite slabs – 800 m², paving bricks – 1,354 m

3D works:
– construction of traction substation with equipment

Electrical works:
– reconstruction of cable lines SN i NN – 16,630 m
– reconstruction of fibre-optic telecommunication network – 15,873 m
– assembly of street lighting posts – 385 pcs
– illumination of Fort Mogilski
– construction of traffic lights

MODERNIZATION OF TRAMWAY TRACK AND STOP PLATFORMS AS PART OF THE PROJECT ENTITLED "MODERNIZATION OF TRAMWAY TRACK ON JEROZOLIMSKIE ALLEY ON THE SECTION OF BANACHA – GOCŁAWEK TURNING LOOPS"

Investor:
Tramwaje Warszawskie Sp. z o.o.

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **27.04.2007 – 15.11.2007**
Gross contract value: **PLN 82 989 618,31**

Contract aim:
The aim of the project was the modernisation of the tram line in Jerozolimskie Alley which constitutes one of the main Warsaw thoroughfares in the East-West direction.

Contract specification:
Railway works:
– assembly of railroad switches with prefabricated block sleepers integrated with concrete sleepers Rheda City – 327 m of single track
– assembly of tramway track from Ri60N tracks with prefabricated block sleepers integrated with concrete Rheda City sleepers – 5,035 m of single track
– tramway track with tracks in ERS cover – 2,460 m of single track
– tramway track on pre-tension concrete sleepers – 534 m of single track
– assembly of Hungarian-type tracks - 52 m of single track
– laying of SEPADUR vibroinsulation mats – 8,756 m^2

Roadworks:
– reprofiling of bridge slabs – 7,661 m^2
– surface from asphalt concrete – 31,749 m^2
– surface from MU-T slabs- 42 m of single track

Drainage works:
– assembly of axel swivel control and heating system

3D works:
– renovation and expansion of stop platforms – 54 pcs

RECONSTRUCTION OF TRAM ROUTE FROM THE KAMIENNA TRAM LOOP TO KROWODRZA GÓRKA TRAM LOOP AND ADJUSTING IT TO THE PARAMETERS OF THE CRACOW FAST TRAM TOGETHER WITH THE CONSTRUCTION OF THE BUS STATION BY THE KROWODRZA GÓRKA TRAM LOOP

Investor:
Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Kraków

Contractor: **ZUE S.A. – Consortium Partner**
Contract period: **24.08.2006 – 16.09.2007**
Gross contract value: **PLN 27 386 541,70**

Contract aim:
The aim of the project was the modernisation of the tram line on the section from the Kamienna tram loop to the Krowodrza Górka housing estate which consisted of adapting the line to the Kraków Fast Tram parameters.

Contract specification:
Railway works:
– tramway track in the "green tracks" technology – 4,011.05 m of single track
– assembly of railroad switches – 7 sets
– assembly of axel swivel control and heating

Overhead lines:
– assembly of overhead lines – 4,200 m of single track

Roadworks:
– construction of the bus terminal with the dispatch office building
– reconstruction of 5 road intersections
– assembly of traffic lights and street lighting
– reconstruction of the central heating network

Engineering works:
– renovation of tram trestle bridge made of steel and reinforced concrete
– renovation of railway bridge made of reinforced concrete

RECONSTRUCTION OF THE LUBICZ STREET TOGETHER WITH CREATING A SEPARATE TRAM AND BUS LANE, RECONSTRUCTION OF THE RAKOWICKA STREET TOGETHER WITH THE TURNING LOOP AND RENOVATION OF RATAINING WALLS AT THE LUBICZ STREET IN CRACOW

Investor:
Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Kraków

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **19.06.2006 – 13.12.2006**
Gross contract value: **PLN 35 799 037,40**

This project was awarded the "Modernization of 2006" award

Contract aim:
The aim of the project was reconstruction of one of the most important tram routes in the historical centre of Cracow.

Contract specification:
Railway works:
– reconstruction of tramway tracks in the covered tracks technology – 3,617 m of single track
– reconstruction of tram turning loop
– reconstruction of railroad switches

Overhead lines:
– reconstruction of overhead lines – 3,825 running metres.

Roadworks:
– reconstruction of the road class L with a separate tram and bus lane
– reconstruction of street lighting
– reconstruction of traffic lights
– reconstruction of traction and power cables

Maintenance works:
– renovation and maintenance works of historical retaining walls – 1,594 m²
– renovation of a historical railway bridge

TRAMWAY LINE: RONDO MOGILSKIE – AL. JANA PAWŁA II – PLAC CENTRALNY TOGETHER WITH A TRAFFIC CONTROL SYSTEM IN CRACOW

Investor:
Budimex S.A. Oddział Budownictwa Komunikacyjnego Południe

Contractor: **ZUE S.A.**
Contract period: **03.03.2014 – 30.06.2015**
Gross contract value: **PLN 15 106 018,99**

Contract specification:
Traction network:
– installation of single (1,000 linear metres) and double (6,000 linear metres) traction network
– foundation of traction pylons – 224 pieces
– installation of drives for traction disconnecting switches – 54 pieces
– installation of track links, return points and return point cabinets

Track works:
– a system for controlling and heating switches

Electricical works:
– conversion of the existing traction and control cables– approx. 15 km
– laying cables, laying some of the cables in easily accessible cable ducts – 540 m

"Wieczysta" substation:
– construction of a new substation with a volume of 735 m3
– tramway traction powering
– medium-voltage 6-panel switchboard, nominal voltage – 17.5 kV
– direct current traction switchboard with 11 panels, nominal voltage – 660 V/DC
– auxiliary supply transformer – 15/0.4 kV
– transformer charger units with a power of 1 200 kVA – 3 complete sets

CONSTRUCTION OF THE ELEMENTS OF INFRASTRUCTURE OF THE TRACTION TRAMWAY ROUTE ON THE PÓŁNOCNY BRIDGE) ALONG WITH THE "OBRAZKOWA" RECTIFIER STATION

Investor:
Tramwaje Warszawskie Sp. z o.o.

Contractor: **ZUE S.A.**
Contract period: **17.02.2012 – 16.01.2013**
Gross contract value: **PLN 10 387 001,73**

Contract specification:
Overhead lines:
– setting of traction posts – 71 pcs
– assembly of flat overhead lines DjpS 100 mm^2 – 300 running metres
– assembly of semi-compensated chain network DjpS 100 + L95 – 6,070 running metres

Energy-related works:
– construction of traction cable lines and return lines YAKY 1x625+2x2.5 mm^2 1kV –14,600 running metres
– construction of cable lines and control lines YKSY 10x2.5 mm^2 1kV – 1,560 running metres
– routing of single-mode optical fibre-6J – 2,640 running metres

"Obrazkowa" rectifier station:
– construction and equipment of the traction substation with the cubic volume of 1,252 m^3
– power supply for tram lines
– 11-bay medium-voltage switchgear, rated voltage – 17.5 kV
– 19-bay DC traction switchgear, rated voltage – 660 V/DC
– transformer rectifier units – 4 pcs.
– transformer for own purposes
The substation was executed as an automatic substation included in the remote substation control system from the Central Power Dispatch

CONSTRUCTION OF ELECTRIC BUS TRACTION AND POWER SUPPLY. CONVERSION OF ROAD LIGHTING FACILITIES IN THE FOLLOWING STREETS: JANA PAWŁA II (FROM ARMII KRAJOWEJ TO NADBYSTRZYCKA STREETS), KROCHMALNA (FROM NADBYSTRZYCKA TO MŁYŃSKA STREETS), MŁYŃSKA (FROM KROCHMALNA TO DWORCOWA STREETS) AND AT THE JUNCTIONS OF MŁYŃSKA--KROCHMALNA-GAZOWA AND MŁYŃSKA-DWORCOWA IN LUBLIN, AS PART OF THE PROJECT "INTEGRATED PUBLIC TRANSPORT SYSTEM IN LUBLIN"

Investor:
Gmina Lublin represented by Zarząd Dróg i Mostów in Lublin

Contractor: **ZUE S.A.**
Contract period: **08.01.2013 – 15.12.2014**
Gross contract value: **PLN 12 361 795,51**

Contract specification:
Traction network:
– foundation of traction-and-lighting pylons – 302 pieces
– traction pylon arm bracket mounting – 226 complete sets
– installation and wiring of electrical switches (11 complete sets) and crossovers (12 complete sets)
– hanging of guide wire Djp 100 mm^2 – 10.06 km
– installation of section insulators with disconnecting switches and drives – 4 complete sets
– laying the power supply cable 1x400 mm^2 – 4.5 km
– installation of power stations with disconnecting switches and drives – 6 complete sets

Lighting:
– installation of lighting sets on arm brackets – 281 complete sets
– laying the YKY 5x25 mm2 power supply cable in protective bushings – 10.8 km

CONSTRUCTION OF ELECTRIC BUS TRACTION TOGETHER WITH POWER SUPPLY AND "PORĘBA" SUBSTATION. CONVERSION OF ROAD LIGHTING FACILITIES IN THE FOLLOWING STREETS: JANA PAWŁA II (FROM ARMII KRAJOWEJ TO GRANITOWA STREETS), ARMII KRAJOWEJ (FROM JANA PAWŁA II TO ORKANA STREETS) AND GRANITOWA IN LUBLIN AS PART OF THE PROJECT "INTEGRATED PUBLIC TRANSPORT SYSTEM IN LUBLIN"

Investor:
Gmina Lublin represented by Zarząd Dróg i Mostów in Lublin

Contractor: **ZUE S.A.**
Contract period: **22.02.2013 – 15.12.2014**
Gross contract value: **PLN 6 843 188,57**

Contract specification:
Traction network:
– foundation of traction and lighting pylons – 66 pieces
– traction pylon arm bracket mounting – 91 complete sets
– installation and wiring of electrical switches and crossovers – 4 complete sets
– hanging of guide wire Djp 100 mm^2 – 3.9 km
– installation of section insulators with disconnecting switches and drives – 6 complete sets
– laying the power supply cable 1x400 mm^2 – 7.6 km
– installation of power stations with disconnecting switches and drives – 8 complete sets

Lighting:
– installation of lighting sets on arm brackets – 66 complete sets
– laying the YKY 5x25 mm^2 power cable in protective cable bushings – 2.2 km

Traction substation:
– construction of the substation facility with an access road
– 15 kV medium-voltage switchboard (5 panels)
– 660 V direct current switchboard (6 panels)
– charger unit – 1 piece
– AC/DC auxiliary switchboard
– 230 V power house
– earthing system, power supply system, telemechanics system, alarm system, fire detection system, mechanical ventilation system

CONSTRUCTION OF THE "STANIEWIECKA" TRACTION SUBSTATION BUILDING IN WARSAW ALONG WITH EQUIPMENT

Investor: **Tramwaje Warszawskie Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **12.2013 – 01.2015**

Contract specification:
– name of substation: Staniewiecka
– construction, cubic volume – 1,400.55 m^3
– 11-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 20-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,600 kVA – 4 sets

CONSTRUCTION OF THE TRAMWAY LINE ALONG WITH THE ROAD SYSTEMOF THE ŚWIATOWIDA STREET AND PROJEKTOWANA STREET

Investor: **Tramwaje Warszawskie Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **02.2014 – 05.2015**

Contract specification:
– name of substation: Ćmielowska
– construction, cubic volume – 1,306.1 m^3
– 10-pole medium-voltage switchgear, rated voltage – 24 kV
– 14-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 3 sets

RECONSTRUCTION OF THE TRAM LINE ON THE SECTION STRETCHING FROM RONDO MOGILSKIE ROUNDABOUT – JANA PAWŁA II AVENUE – PLAC CENTRALNY ALONG WITH THE TRAFFIC CONTROL SYSTEM IN CRACOW

Investor: **Budimex S.A. Oddział Budownictwa Komunikacyjnego Południe**
Contractor: **ZUE S.A.**
Contract period: **03.2014 – 06.2015**

Contract specification:
– name of substation: Wieczysta
– construction, cubic volume – 735.00 m^3
– 6-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 11-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 3 sets

CONSTRUCTION OF THE ELEMENTS OF INFRASTRUCTURE OF THE TRACTION TRAMWAY ROUTE ON THE MARII SKŁODOWSKIEJ CURIE BRIDGE (FORMERLY THE PÓŁNOCNY BRIDGE) ALONG WITH THE "OBRAZKOWA" RECTIFIER STATION

Investor: **Tramwaje Warszawskie Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **02.2012 – 12.2012**

Contract specification:
– name of substation: Obrazkowa
– construction, cubic volume – 1,252.00 m^3
– 11-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 19-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 4 sets

CONSTRUCTION OF THE OSIEDLE LECHA – FRANOWO TRAM ROUTE

Investor: **Infrastruktura Euro Poznań 2012 Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **04.2011 – 07.2012**

Contract specification:
– name of substation: Rataje
– renovation, cubic volume – 1,446 m3
– 10-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 18-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 4 sets

CONSTRUCTION OF THE FRANOWO TRAM DEPOT IN POZNAŃ

Investor: **Miejskie Przedsiębiorstwo Komunikacyjne w Poznaniu Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **07.2011 – 09.2012**

Contract specification:
– name of substation: Franowo station
– construction, cubic volume – 1 401.33 m^3
– 12-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 17-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 4 sets

CONSTRUCTION OF THE KST [KRAKÓW FAST TRAM] N-S TRAM LINE, STAGE IIA: RONDO GRZEGÓRZECKIE ROUNDABOUT – KOTLARSKI BRIDGE – KLIMECKIEGO – LIPSKA STREET ALONG WITH THE RECONSTRUCTION OF THE RIGHT-OF-WAY AND CONSTRUCTION OF KUKLIŃSKIEGO STREET AND A TRESTLE BRIDGE OF THE STREETS NOWOHUCKA AND POWSTAŃCÓW WIELKOPOLSKICH IN KRAKÓW

Investor: **Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Kraków**
Contractor: **ZUE S.A.**
Contract period: **01.2010 – 06.2011**

Contract specification:
– name of substation: Szklarska
– construction, cubic volume – 644.8 m^3
– 8-pole medium-voltage switchgear, rated voltage – 17.5 kV
– 12-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 3 sets

"DWORSKA" POWER SUPPLY STATION ALONG WITH THE CONSTRUCTION OF THE POWER SUPPLY SYSTEMS FOR THE MV RECTIFIER STATION AND THE LV TRAMWAY LINE

Investor: **Wrocławskie Inwestycje Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **01.2011 – 01.2012**

Contract specification:
– name of substation: Dworska
– construction, cubic volume – 1,149.33 m^3
– 8-pole medium-voltage switchgear, rated voltage – 24 kV
– 11-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 3 sets

"MILENIJNA" POWER SUPPLY STATION ALONG WITH THE CONSTRUCTION OF THE POWER SUPPLY SYSTEMS FOR THE MV RECTIFIER STATION AND THE LV TRAMWAY LINE

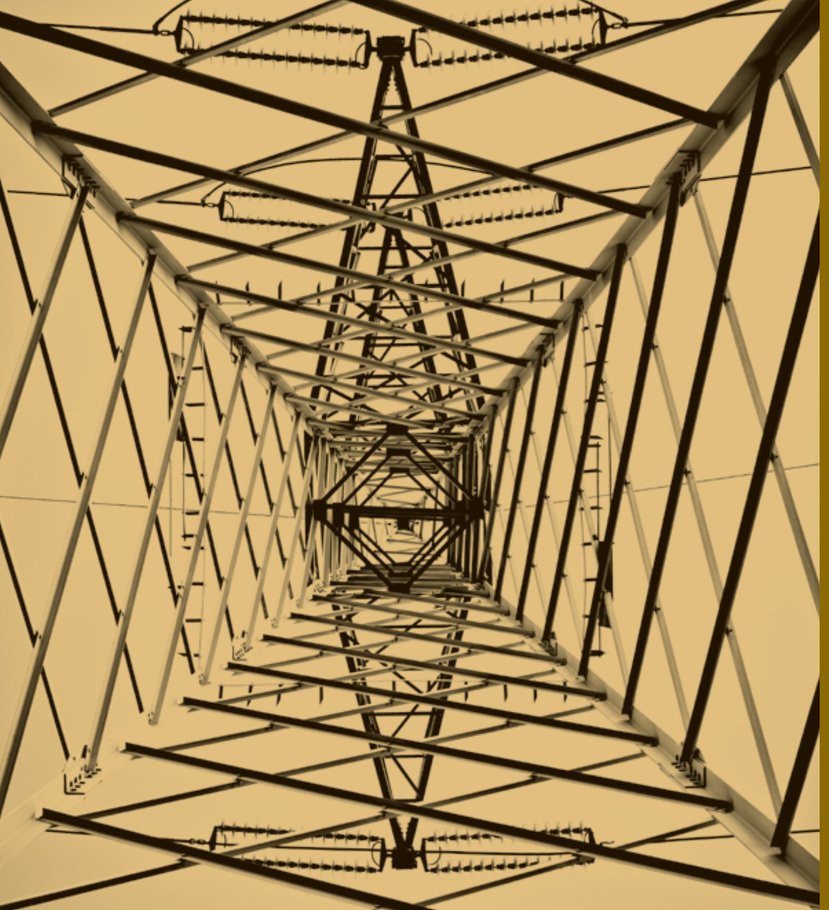
Investor: **Wrocławskie Inwestycje Sp. z o.o.**
Contractor: **ZUE S.A.**
Contract period: **01.2011 – 01.2012**

Contract specification:
– name of substation: Milenijna
– construction, cubic volume – 1,177.1 m^3
– 9-pole medium-voltage switchgear, rated voltage – 24 kV
– 15-pole DC traction switchgear, rated voltage – 660 V/DC
– rectifier unit with a capacity of 1,200 kVA – 4 sets

DESIGN AND IMPLEMENTATION OF MODERNISATION WORKS FOR 3 RECTIFIER SUBSTATIONS SUPPLYING POWER FOR TROLLEYBUS OVERHEAD LINES AND THE CENTRAL CONTROL ROOM IN LUBLIN

Investor: **Miejskie Przedsiębiorstwo Komunikacyjne w Lublinie**
Contractor: **ZUE S.A.**
Contract period: **06.2011 – 08.2012**

Contract specification:
– name of substation: Szczerbowskiego, Garbarska, Helenów,
– renovation, Szczerbowskiego (cubic volume – 2,520 m^3),
Garbarska (cubic volume – 1,300 m^3),
Helenów (cubic volume – 1,055 m^3)
– power supply for trolleybus overhead lines
– 8-pole medium-voltage switchgear, rated voltage – 17.5 kV (Szczerbowskiego)
– 8-pole medium-voltage switchgear, rated voltage – 17.5 kV (Garbarska)
– 8-pole medium-voltage switchgear, rated voltage – 17.5 kV (Helenów)
– 11-pole DC traction switchgear, rated voltage – 660 V/DC (Szczerbowskiego)
– 12-pole DC traction switchgear, rated voltage – 660 V/DC (Garbarska)
– 11-pole DC traction switchgear, rated voltage – 660 V/DC (Helenów)
– rectifier unit with a capacity of 1,200 kVA – 9 sets



ENERGY INFRASTRUCTURE

CONSTRUCTION OF THE 400 KV KOZIENICE – OŁTARZEW LINE WITH TWO TRACKS

Investor:
Polskie Sieci Elektroenergetyczne S.A.

Contractor: **ZUE S.A. – Consortium Leader**
Contract period: **25.03.2014 – 30.06.2019**
Gross contract value: **PLN 576 870 000,00**

Contract aim:
– the aim of the project was to design and construct the 400 kV ground line with two tracks on the Kozienice – Ołtarzew section
– expansion of secondary circuits of the 400 kV distribution centre for two 400 kV fields to Kozienice in SE 400/220/110 kV Ołtarzew as well as providing additional equipment and assembly of half-components for sectional protection and teleprotections for two 400 kV fields to Ołtarzew in SE Kozienice
– start-up of 2 tracks for 400 kV Kozienice – Ołtarzew line, feeder bays for 400 kV Kozienice 1, Kozienice 2 in SE Ołtarzew, feeder bays for 400 kV Ołtarzew 1, Ołtarzew 2 in SE Kozienice and full cooperation with station circuits and related objects

Contract specification:
– location: Masovian Voivodeship
– line length: approx. 130 km
– maximum wind span: 450 m
– width of the buffer zone: 70 m
– type of posts: double steel trussed construction series E33
– foundations: prefabricated and field
– phase conductors: bundle 3 x 357-AL1/46-ST1A (corresponds to the AFL-8 350 mm^2 construction)
– earth wires: steel and aluminium wire type ACSR AFL-1,7 and one or two OPGW wires (Optical Ground Wire) with parameters adjusted to the shorting conditions on the line
– insulation: chains with glass cap insulators
– grounding: surface and deep

MODERNISATION OF THE HIGH-VOLTAGE 110 KV LINES ON THE BIŁGORAJ – NISKO SECTION

Investor:
PGE DYSTRYBUCJA Zamość Branch

Contractor: **Biuro Projektów Komunikacyjnych w Poznaniu Sp. z o.o. (ZUE Group)**
Subcontractor: **ZUE S.A.**
Contract period: **30.03.2015 – 01.02.2018**
Gross contract value: **PLN 2 526 420**

Contract aim:
The objective of the project is the development of the project and formal and legal documentation for the modernisation of the existing 110 KV line on the Biłgoraj – Nisko section

Contract specification:
– location: Lublin Voivodeship
– communes: Biłgoraj town, Biłgoraj commune up until the pole No. 145
– length of the section: 9.034 km
– the number of parcels located in the buffer zone in the commune – 464, in the town 168
– width of the buffer zone: 18 m
– (design works in the Biłgoraj town)
– pole types: double steel trussed structures, in compliance with the PN-EN 50341 standard
– type of the designed foundations: prefabricated and field
– service lines 2x3xAFL- 6 240 mm^2,
– insulator strings: composite
– shieldwires: OPGW type
– (design works in Biłgoraj commune up until the pole No. 145)
– pole types: single steel trussed structures, in compliance with the PN-EN 50341 standard
– type of the designed foundations: prefabricated and field
– service lines 3xAFL-6 240 mm^2
– insulator strings: composite
– shieldwires: OPGW type
– adapting the line to work at + 80°C

MODERNISATION OF THE HIGH-VOLTAGE 110 KV LINES ON THE BIŁGORAJ – NISKO SECTION

Investor:
PGE DYSTRYBUCJA Rzeszów Branch

Contractor: **Biuro Projektów Komunikacyjnych w Poznaniu Sp. z o.o. (ZUE Group)**
Subcontractor: **ZUE S.A.**
Contract period: **30.03.2015 – 01.02.2018**
Gross contract value: **PLN 2 750 280**

Contract aim:
The objective of the project is the development of the project and formal and legal documentation for the modernisation of the existing 110 KV line on the Biłgoraj – Nisko section

Contract specification:
– location: Lublin/Podkarpackie Voivodeship
– communes: Biłgoraj commune – from the pole No. 145, Harasiuki commune, Ulanów town and commune, Nisko town and commune
– the number of parcels located in the buffer zone – 1 343 in total
– length of the section: 34.846 km
– width of the buffer zone: 18 m
– pole types – single trussed and tubular poles, in compliance with the PN-EN 50341 norm
– type of the designed foundations: prefabricated and field
– service lines 3xAFL-6 240 mm^2
– shieldwires: OPGW type
– insulator strings: composite
– adapting the line to work at + 80°C

RAILWAY INFRASTRUCTURE

DESIGN AND MODERNISATION OF THE WARSAW – ŁÓDŹ RAILWAY LINE, STAGE II, WARSZAWA ZACHODNIA STATION – SKIERNIEWICE SECTION, AS PART OF THE POLIŚ PROGRAMME 7.1-24.1 „MODERNISATION OF THE WARSZAWA – ŁÓDŹ RAILWAY LINE, STAGE II, LOT A –WARSZAWA ZACHODNIA STATION – MIEDNIEWICE (SKIERNIEWICE) SECTION"

Investor:
Pomorskie Przedsiębiorstwo Mechaniczno–Torowe Sp. z o.o.

Contractor: **ZUE S.A.**
Contract period: **04.03.2014 – 30.09.2015**
Gross contract value: **PLN 88 356 974,65**

Contract aim:
The aim of the contract was to adapt the track system of the Grodzisk Mazowiecki station to operate the train movement with speed of V=160 km/h along the main fundamental tracks No. 1 and No. 2 of the line No. 1 and with speed of V=120 km/h along the main fundamental tracks No. 3 and 4 of the line No. 447.

Contract specification:
Rail works:
– replacement of tracks for a 60E1-type jointless tract with the total length of 15,413.73 m of single track
– construction of railroad switches (including 8 sets of prototype Rz2500-1:26,5 switches) - 51 pcs.

Engineering works:
– construction of the platform No. 1, side station platform, single-rimmed, located on the main fundamental track No. 4 (length 250 linear metres, width 4.50 linear metres, height 0.76 m above the rail head).
– construction of the platform No. 2, island platform, double-rimmed, located between the main fundamental tracks No. 3 and main additional tracks No. 14 (length 300 linear metres, width 9.95 linear metres, height 0.76 m above the rail head).

Drainage works:
– construction of the drainage of the track system using the drains and collectors draining them into the existing rainwater receivers.

DESIGN AND EXECUTION OF THE CONSTRUCTION WORKS AS PART OF THE PROJECT "IMPROVEMENT OF THE QUALITY OF TRANSPORT SERVICES THROUGH THE IMPROVEMENT OF THE TECHNICAL STATE OF THE RAILWAY LINES NO. 1, 133, 160, 186 ON THE ZAWIERCIE – DĄBROWA GÓRNICZA ZĄBKOWICE – JAWORZNO SZCZAKOWA SECTION" CONTRACT 90/112/0006/13/Z/I

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A.**
Contract period: **25.03.2013 – 12.07.2015**
Gross contract value: **PLN 439 291 381,95**

Contract aim:
The aim of the project was to restore the timetable speed V=120 km/h for the passenger trains and V=100 km/h for freight trains on lines No. 1 and 133 and the design speed of V=100 km/h for lines No. 160 and V=80 km/h for lines No. 186 and maintaining current axle load amounting to 221 kN for the lines No. 1, 133, 18 and to 206 kN for line No. 160. The renovated track No. 1 and 2 of the line No. 1 was put into operation before 14.12.2014, which allowed for the inclusion of the Pendolino train runs in the relevant section of the timetable drawn up for 2015.

Contract specification:
Rail works:
– comprehensive replacement of the track surface over the length of 68.54 km, including the cleaning and refilling of the gravel ballast
– replacement of railroad switches – 149 sets
– protective layer of 30 cm in thickness, deep drainage
– repair of the A and B category crossings.
Overhead lines:
– comprehensive replacement of 72.002 km of overhead lines with elements of the whole network (columns, gates)
Srk equipment (signalling equipment) and the teletechnics:
– replacement of the drives in the switches – 212 pcs.
– construction of the axle counting system (5 switch circles)
– replacement of the signalling units and semaphores.
– construction of a new computer line block on the ŁC-DZA section, reconstruction of the underground telecommunication infrastructure (collisions)
Engineering structures:
– repair of 37 engineering structures, that is 9 overpasses, 9 bridges, 19 ducts
– repair works on 3 passenger stops: Sikorka, Chruszczobród, Wiesiółka and 3 nodal railway stations: Łazy, Dąbrowa Górnicza Ząbkowice and Sosnowiec Maczki (adjusting the parameters of the platforms to existing standards, installations of L-type walls and P-type platform slabs, disassembly and assembly of platform shelters, construction of ramps for the disabled, replacement of small architecture structures, assembly of passenger service equipment.
Non-traction power engineering:
– replacement of the devices for railroad switch electric heating (EOR) with wiring and installation of cabinets and control panels – 265 pcs.
– replacement of the lighting columns with the wiring – 404 pcs.
– new control cabinets

REVITALISATION OF THE TRACK NO. 2 OF THE RAILWAY LINE NO. 61 KIELCE – FOSOWSKIE, KONIECPOL – CZĘSTOCHOWA STRADOM SECTION AS PART OF THE INVESTMENT TASK „REVITALISATION OF RAILWAY LINE NO. 61 AND 572, WŁOSZCZOWA PÓŁNOC – CZĘSTOCHOWA STRADOM SECTION"

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A.**
Contract period: **10.12.2013 – 17.06.2015**
Gross contract value: **PLN 43 880 619,00**

Contract specification:

Rail works:
– replacement of tracks and inserts – 16.504 km of track
– mechanical ballast cleaning – 16.337 km of track
– raising and adjusting the track in the plan and the profile – 16.750 km of track
– replacement of railroad switches – 6 sets
– substructure strengthening – 3.555 km of track
– reconstruction of side ditches – 5,060 of linear metres.

Engineering works:
– revitalisation of engineering structures (overpasses, bridges, pedestrian underground passes) – 15 pcs.

Overhead lines:
– construction of overhead line flexibility
– replacement of the support structures of the overhead lines with the equipment
– adjustment of the overhead lines over the reconstructed track No. 2 from 100,007 kilometre to 116,794, kilometre over the replaced switches on the level junctions Kucelinka No. 2, 5, 6, and in station Częstochowa Stradom No. 5

Electrical works:
– disassembly and reconstruction of the trackside EOR devices in the switches No. 2, 5, 6, 8 for the level junction Kucelinka (new heaters in the abovementioned switches)
– lighting on the crossing at 77,878 and 83,989 km

Automation and telecommunication:

Turów station:
– replacement of the classic equipment of the tracks with double-rail insulation – 1 set
– replacement of the complete signalling units with their platforms: 0, ISp0, IISPo, IIISpo, To0
– replacement of the track SHP electromagnets (2 sets in the anti-theft version)

Kucelinka level junction:
– replacement of electrical point machines with securing them in the switches No. 1, 2, 5, 6, 8
– replacement of the classic equipment of the tracks with double-rail insulation (2 sets) and single-rail insulation (5 sets)
– replacement of the complete signalling units with their platforms: B, ToB, 6, ISp6, To6

Częstochowa Stradom station:
– replacement of electrical point machines with securing them in the switches No. 3, 4, 5
– disassembly and reassembly of track elements
– file alarm system devices and technological communication as well as TVU on the C category (currently D category) crossings a the 74,899 km; B category (currently D category) at 77,878 km, 83,898 km

"MODERNIZATION OF RAILWAY LINE E 65/C-E65 ON SECTION WARSAW – GDYNIA –LCS DZIAŁDOWO AREA" AS PART OF THE PROJECT POIiŚ 7.1-41

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA – Consortium Partner,**
ZUE S.A. – Consortium Partner
Contract period: **10.06.2010 – 24.10.2013**
Gross contract value: **PLN 878 061 493,51**

Contract aim:
The aim of the project was to improve the safety and adjust line E-65 to technical standards, which allow passenger trains to reach the speed of 160 km/h, 200 km/h for tilting trains and 120 km/h for freight trains and a load of 221 kN, and 200/250 km/h in case of overhead lines.

Contract specification:
– Mława – Iłowo route from km 131.100 to km 135.000
– Iłowo station from km 135.000 to km 137.600
– Iłowo – Działdowo route from km 137.600 to km 140.000
– Iłowo – Działdowo route (including P.O. Narzym) from km 140.000 to km 143.900
– Iłowo – Działdowo route from km 143.900 to km 147.100
– Działdowo station from km 147.100 to km 149.600
– Działdowo – Gralewo route from km 149.600 to km 161.350
– Gralewo station from km 161.350 to km 163.225
– Gralewo –Rybno Pomorskie route (including P.O. Zabiny and P.O. Tuczki) from km 163.225 to km 171.800
– Rybno Pomorskie station from km 171.800 to km 174.200
– Rybno Pomorskie – Montowo route (including P.O. Jeglia and P.O. Hartowiec) from km 174.200 to km 182.345
– Montowo station from km 182.345 to km 184.800

Scope of works:
– track system with drainage
– roadworks
– rail traffic control
- TK and PLK telecommunication
– overhead lines, power supply and non-contact electrical power engineering
– reconstruction of engineering objects
– reconstruction and renovation of the station building (Iłowo and Działdowo station)

MODERNIZATION OF THE TUNNEL RAILWAY STATION ON THE RAILWAY LINE NO 8 WARSZAWA ZACHODNIA – KRAKÓW GŁÓWNY OSOBOWY

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA**
Contract period: **08.01.2013 – 13.12.2013**
Gross contract value: **PLN 51 603 408,20**

Contract aim:
The aim of the project was the modernization of the tunnel railway station together with improving the safety and adjusting the tracks to technical standards, which allow the trains to reach the design speed of V=90/110 km/h.

Contract specification:
Railway works:
– laying of jointless track with 60E1 rails and SB-type attachment to pre-tension concrete sleepers PS-94 – 5.31 km
– laying of UIC 60 railroad switches on pre-tension concrete switch sleepers: Rz 1:9 R-190m – 2 sets, Rz 1:9 R-300 m – 7 sets, Rz 1:12 R-500m – 4 sets, arced on wooden switch sleepers Rz 1:9 – 1 set,
– subsurface drainage (from drainage pipes – approx. 1,500 running meters, from drain interceptors – approx. 1,200 running meters), linear – 206 running meters
– manholes and connecting chambers – 100 pcs
– ramming under tracks from HOBAS D:616 mm pipes – 57 m

Overhead lines:
– disassembly of approx. 6 km of overhead lines and 140 pcs of supporting constructions,
– assembly of approx. 9 km of overhead lines and 160 pcs of supporting constructions on pile foundations

Rail traffic control:
– rail traffic control equipment

Engineering works:
– construction of an island platform with access to two tracks between main tracks with the length of 200 m and width of 7 m
– passage category "A" from rubber slabs with rail longitudinal inclination on the crossing of 3.00‰
– renovation of culverts on km 267.593 and 268.201
– „green wall" noise barriers (EK1: h=4.35, L=169.3 m, EK2: h=4.35, L=79.8 m, EK 3: h=5.85, L=42 m) – 291.1 m

Energy-related works:
– EOR equipment – 14 sets
– lighting of platforms, passages and railroad switches

Telecommunication works:
– CCTV and passenger information system
– reconstruction (3,000 m) and development (400 m) of optical fibre
– development (400 m) and reconstruction (145 m) of cables

Construction works:
– new fully-equipped control rooms from 6 standard containers (3 working and 3 technical)

RECONSTRUCTION OF THE SIDING RAIL AND INTERAL ACCESS ROADS IN "RYBNIK" S.A. POWER PLANT TOGETHER WITH AN ADJOINING INFRASTRUCTURE

Investor:
EDF POLSKA S.A.

Contractor: **PRK Kraków SA**
Contract period: **27.01.2012 – 30.08.2013**
Gross contract value: **PLN 114 313 609,29**

Contract aim:
The aim of the project connected with preparing the construction site of a new power unit was the construction of municipal infrastructure to service the foregoing power unit.

Contract specification:
Railway works:
– demolition of the old (4.415 km) and construction of the new siding rail with the length of 3.618 km
– construction of: normal railroad switches (8 pcs) , intersection (1 pcs), cross railroad switches with electrical heating (6 pcs)
– Strail – type rail and road crossings – 2 sets

Rail traffic control:
– rail traffic control systems

Engineering works:
– construction of a trestle with compressed air with the length of 219.5 m and weight of 150 t.
– straightening of the coastline with rock filling
– construction of an overpass from prefabricated elements from reinforced concrete with the length of 25.48 running metres.
– construction of embankment from the mixture of ash and slag with the cubic volume 150 thousand m^3
– construction of the retaining wall from gabions with the volume of 1,600 m^3
– construction of two-chamber reservoirs of storm water with the volume of 2 thousand m^3
– construction of storm water pump stations with the volume of 160 m^3
– construction of pre-fabricated culverts with the length of over 51 running metres – 2 sets
– construction of two culverts from KWH PIPE Weholite Ø1200 pipes.

Roadworks:
– construction of 9,837 m^2 of roads
– construction of cobblestone sidewalks with the area of 1,200 m^2

Energy-related works:
– external lighting
– assembly of monitoring with power supply

RECONSTRUCTION OF KATOWICE STATION WITHIN PLATFORMS 2, 3, 4 AS PART OF THE INVESTMENT PROGRAM: „MODERNIZATION OF TRACK SYSTEM ON LINES NO 1, 137, 139 AND PASSENGER SERVICE INFRASTRUCTURE WITHIN THE KATOWICE OSOBOWA STATION"

This project was awarded the 2nd Degree Prize in the Construction of the Year Competition 2013

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA**
Contract period: **22.08.2011 – 31.08.2013**
Gross contract value:
PLN 67 847 224,62

Contract aim:
The aim of the project was modernization of the railway station infrastructure in order to improve the safety of travellers and communication on the Katowice station.

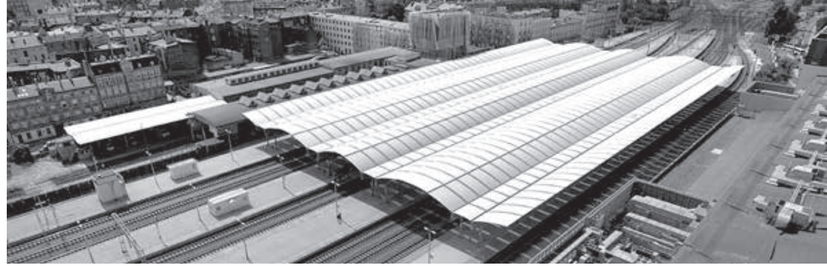
Contract specification:
Railway works:
– replacement of tracks for an S60-type jointless tract with the total length of 3,423.81 m of single track

Overhead lines:
– reconstruction of overhead lines – 6 km
– suspension of overhead lines on new support structures

Rail traffic control:
– reconstruction of rail traffic control system
– assembly of monitoring with power supply
– traffic lights

Engineering works:
– construction of shelters for platforms No. 1-4 with the total weight of over 1,480 t, assembly of the covering for platform shelters from arch panels with the area of 13,76 m²
– on pad footings from reinforced concrete – 30 pcs
– comprehensive reconstruction of platform No. 2 with two tracks (length 350 m, width 12 m), No. 3 (length 350 m, width 11.1 m) and No. 4 (length 400 m, width 10.9 m)
– comprehensive renovation of the tunnel (replacement of 1,350 m² of granite floor, cleaning of wall cladding from travertine)
– assembly of two-speed escalators – 4 sets
– assembly of vertical platform cranes – 3 sets
– assembly of stair platforms – 4 sets
– assembly of sound systems and visual information systems

Energy-related works:
– external lighting
– construction of cable ducting



CONSTRUCTION WORKS WITHIN THE PROJECT "FAST REGIONAL RAILROAD TYCHY – DĄBROWA GÓRNICZA STAGE I: TYCHY – KATOWICE"

This project was awarded the 3rd Degree Prize in the Construction of the Year Competition 2012

Investor:
Przedsiębiorstwo Komunikacji Miejskiej w Tychach

Contractor: **PRK Kraków SA**
Contract period: **15.02.2011 – 31.07.2012**
Gross contract value:
PLN 34 849 616,93

Contract aim:
The aim of the project was creating modern railroad infrastructure in Tychy by building three and modernizing one rail stop.

Contract specification:
Railway works:
– construction of seven platforms with the total length of 1,486 m
– adjustment of track – 3.5 km
– replacement of sleepers – 663 pcs

Overhead lines:
– assembly of overhead lines – 2.179 km
– assembly of traction posts – 45 pcs

Rail traffic control:
– reconstruction of rail traffic control system

Engineering works:
– assembly of 14 staircases with bearing structures
– assembly of 14 platform shelters
– construction of bike ramps
– construction of slope steps

Energy-related works:
– external lighting
– assembly of monitoring with power supply
– on-line Passenger Information System
– Sound Warning System

CONSTRUCTION WORKS ON THE MODERNIZATION OF RAILROAD LINE NO 8. STAGE I: SECTION WARSZAWA ZACHODNIA – WARSZAWA OKĘCIE AND CONSTRUCTION OF THE RAIL LINK WARSZAWA SŁUŻEWIEC – OKĘCIE AIRPORT. STAGE 3: CONSTRUCTION WORKS ON THE RAIL LINK (PROJECT NO POIIŚ 7.1-18)

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A. – Consortium Partner**
Contract period: **27.10.2009 – 23.07.2012**
Gross contract value: **PLN 61 228 938,31**

Contract specification:
Railway works:
– construction of 60E1-type railway lines 60E1 with flexible non-sleeper mounting on rigid EBS-type concrete blocks EBS – 3,224.27 m
– assembly of railroad switches – 4 pcs together with intersections on EBS-type concrete blocks
– linear drainage on the tramway track – 2,681 m

Overhead lines:
– construction of overhead lines – 4,514 m

Energy-related works:
– equipment of Okęcie traction substation
– equipment of trafo-stations for the supply of tunnel and railway station named after Fryderyk Chopin
– construction of ground cables supplying 15 kV power facilities
– construction of low-voltage power ground cables
– basic and emergency lighting installations in the tunnel and station named after Fryderyk Chopin
– SAP fire detection installation in the tunnel and station
– DSO Sound Warning System on the station named after Fryderyk Chopin
– construction of railroad switches heating installation
– construction of power supply for the SBL Automatic Linear Blockade
– construction of FM 200 gas extinguishing installation in the OKL control room

Sanitary works:
– construction of dry water supply network installation in the tunnel – 2,172.52 m
– construction of water supply network installation on the station named after Fryderyk Chopin – 166.77 m
– construction of the de-smoking installation in the tunnel and on the station named after Fryderyk Chopin
– construction of the sanitary installation in the Okęcie OKL control room and Okęcie traction substation
– construction of the central heating installation in the Okęcie OKL control room

Engineering works:
– construction of passenger shelters on the Służewiec rail stop

RECONSTRUCTION AND MODERNIZATION OF RAILROAD LINES E-30 AND CE30, SECTION LEGNICA – WROCŁAW – OPOLE, ŚRODA ŚLĄSKA – MALCZYCE ROUTE, TRACK NO 1 AND 2 WITH THE STATION IN MALCZYCE

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA – Consortium Partner**
Contract period: **06.03.2009 – 30.06.2011**
Gross contract value: **PLN 208 982 075,84**

Contract aim:
The aim of the project was to improve the safety and adjust line E-30 to technical standards, which allow passenger trains to reach the speed of 160 km/h and freight trains 120 km/h.

Contract specification:
Railway works:
– assembly of track on pre-tension concrete sleepers PS94 – 24.028 km
– assembly of railroad switches – 43 sets
– modernization of passages

Overhead lines:
– assembly of overhead lines – 29.786 km
– assembly of traction posts (407 pcs) and traction gates (19 pcs)

Engineering works:
– construction and modernization of three platforms with the length of (429 m, 218 m and 198 m) together with small architecture elements
– construction of tunnel passage with ramps for the disabled
– reconstruction of four railway bridges
– construction of road culverts – 8 pcs
– modernization of rail culverts – 7 pcs
– construction of embankment protection systems

Drainage works:
– construction of drain interceptors and interceptors – 6,897 running meters

CONSTRUCTION WORKS IN THE AREA OF LCS NASIELSK: LOT A – COMPREHENSIVE MODERNIZATION OF LEGIONOWO, NOWY DWÓR MAZOWIECKI, MODLIN STATIONS AS PART OF THE PROJECT "MODERNIZATION ON THE RAILROAD LINE E-65, SECTION WARSZAWA – GDYNIA, STAGE II" IN POLAND, PROJECT NO 2005/PL/16/C/PT/001

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA – Consortium Partner**
Contract period: **30.06.2008 – 30.06.2010**
Gross contract value: **EUR 123 362 757,52**

Contract aim:
The aim of the project was modernizing three railway stations on the line No E-65 together with adjusting it to technical standards, which allow passenger trains to reach the speed of 160 km/h and freight trains 120 km/h.

Contract specification:
Railway works:
– assembly of tracks from 60E1 and S49 rails on pre-tension concrete sleepers – 31 km
– modernization of track systems with railroad beds, drainage, track infrastructure and platforms
– assembly of railroad switches – 60 sets
– assembly of buffer stops – 13 sets
– railways crossings – 9 pcs
– construction of the interceptor (d:400, d:500 d:800) – 1,920 running metres

Overhead lines:
– assembly of overhead lines – 56.7 km

Rail traffic control:
– rail traffic control equipment

Engineering works:
– railway bridge and walkway for passengers
– construction and renovation of three platforms with two tracks and two underground passages

Telecommunication works:
– assembly of telecommunication equipment and network

MODERNIZATION OF THE TRACK SYSTEM FOR PASSENGER TRAIN TRAFFIC ON LINES NO 19 WARSZAWA GŁÓWNA TOWAROWA – JÓZEFINÓW, NO 507 WARSZAWA GŁÓWNA TOWAROWA – WARSZAWA GOŁĄBKI, NO 509 WARSZAWA GŁÓWNA TOWAROWA – WARSZAWA GDAŃSKA

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA – Consortium Partner**
Contract period: **15.10.2008 – 31.12.2009**
Gross contract value: **PLN 146 320 373,88**

Contract aim:
The aim of the project was modernization of lines No 19, 507 and 509 together with adjusting them to technical standards, which allow passenger trains to reach the speed of 80 km/h.

Contract specification:
Railway works:
– railway and railroad bed works with drainage
– disassembly of railroad switches and track surface
– railroad bed to improve the load-bearing capacity
– reinforcement of the railroad bed with geogrid and non-woven geotextiles
– assembly of tracks from 60E1 and 49E1 rails on pre-tensioned sleepers
– assembly of railroad switches 60E1;
R=300 and R=190; 1:9; V=160km/h – 5 sets
– assembly of railroad switches 49E1; R=190; 1:9; V=160km/h – 4 sets
– assembly of railroad switches Rkpd 60E1 and 49E1 – 4 sets
– assembly of rail crossings 60E1 and 49E1 – 4 sets

REPLACEMENT OF RAILROAD SURFACE AND REINFORCEMENT OF UPPER LAYERS OF RAILROAD BEDDING ON THE ROUTE PSARY – GÓRA WŁODOWSKA ON TRACK NO 1 ON KM 170.850 – 181.500 – AS PART OF THE PROJECT: "MODERNIZATION OF THE RAILROAD LINE NO 4 – E65 SECTION GRODZISK MAZOWIECKI – ZAWIERCIE"

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA**
Contract period: **12.09.2008 – 30.09.2009**
Gross contract value: **PLN 23 088 430,63**

Contract aim:
The aim of the project was the construction of the test railroad bedding and surface for the adjustment of line CMK to technical standards, i.e. the speed of V = 300/350 km/h and admissible load of 250 kN/axis for the design and performance basis.

On 24 November 2013, as a part of the test of the constructed section ED250-001, Pendolino reached the speed of **293 km/h** thus setting a record for speed rail vehicle on the tracks in Eastern Europe. On 29 August 2015. on the same section, the four-section electrical traction system Newag Impuls 45WE-002, broke the speed record for a train of completely Polish production reaching the speed of **226 km/h.** 19 February 2013 Newag Impuls 31WE was the first Polish train to exceed the speed of 200 km/h, which is regarded by UIC (in regular operation on modernized lines) as the speed limit of the High-Speed Rail, by reaching the speed of **211.6 km/h**. Earlier, on 17/18 May 2009, on the same section, the Husarz EU44 locomotive (Siemens Euro Sprinter ES64U4) reached the speed of 235 km/h, breaking the Polish speed record for the train with a locomotive.

Contract specification:
Design:
– grade line project design and adjustment of axis on track no 1

Railway works:
– UIC 60 surface dismantling – 3 km
– laying of UIC 60 rails on ICOSTRUN 01 sleepers (1 km) and PS08 sleepers (2 km)
– reinforcement of railroad bedding with stone mix with the use of AHM and FSM machines– 14,302.8 m^3
– evening of the bottom ballast layer with the use of AHM with geogrid reinforcement – 2,800 m^2
– welding of 120 running metres of rails on track with a welding machine with temperature recording unit – 76 pcs
– injection of the top ballast layer with polyurethane resins – 2,338 m^2

MODERNIZATION OF THE RAILWAY LINE NO 71 RZESZÓW – WARSZAWA THROUGH KOLBUSZOWA. STAGE II – RECONSTRUCTION OF THE TRACK SYSTEM ON THE KOLBUSZOWA STATION

Investor:
PKP Polskie Linie Kolejowe S.A.

This project was awarded
the 3rd Degree Prize in
the Competition Construction of 2009

Contractor: **PRK Kraków SA**
Contract period: **31.07.2008 – 25.02.2009**
Gross contract value: **PLN 28 988 162,58**

Contract aim:
The aim of the project was the modernisation of the Kolbuszowa station in order to improve the comfort and safety of the service, related to resuming the train movement on the Rzeszów-Kolbuszowa section.

Contract specification:
Railway works:
– construction of 5 new tracks from 60E1 rails on pre-tension concrete sleepers (1 basic, 3 additional, 1 for loading) – 4,313.6 m
– construction of railroad switches from 60E1 rails on concrete sleepers – 7 sets
– construction of railroad bed reinforced with non-woven geofabrics and geogrid
– subsurface drainage with interceptors
– reconstruction of the railway crossing surface from Strail rubber slabs

Rail traffic control:
– reconstruction of rail traffic control equipment
– construction of systems used for observing signals at the end of the train

Engineering works:
– construction of an underground passenger tunnel (length 29.9 m, width 4 m) with platforms for the disabled
– construction of an island platform (length 400 m, width 9.55 m) together with 6 platform shelters
– reconstruction of culverts – 3 pcs

Telecommunication works:
– construction of telecommunication equipment and network

Energy-related works:
– construction of cable ducting
– construction of lighting

MODERNIZATION OF THE RAILWAY LINE E-30 SECTION OPOLE – WROCŁAW – LEGNICA. RECONSTRUCTION OF THE OŁAWA STATION

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA – Consortium Partner**
Contract period: **26.04.2007 – 31.12.2008**
Gross contract value: **EUR 14 956 102,00**

Contract aim:
The aim of this project was to improve the safety and adjust the line E-30 to technical standards, which allow passenger trains to reach the speed of 160 km/h and freight trains - 120 km/h.

Contract specification:
Railway works:
– laying of tracks from UIC 60 rails on pre-tensioned sleepers (6.8 km) and wooden sleepers (1.74 km)
– laying of side tracks from S49 rails – 1.7 km
– assembly of railroad switches – 34 sets
– construction of dewatering wells – 83 pcs

Overhead lines:
– assembly of overhead lines

Rail traffic control:
– assembly of railway automation equipment

Energy-related works:
– assembly of railroad switches heating systems
– assembly of low-voltage cable lines – 10.796 km

Engineering works:
– renovation of existing objects (overpass, bridge, underground passage for travellers)
– construction of a new island platform with shelter and access to two tracks
– assembly of noise barriers – 9,387.8 m²

MODERNIZATION OF THE RAILWAY LINE SPYTKOWICE – WADOWICE – KALWARIA. RECONSTRUCTION, RENOVATION OF TRACKS AND RAILWAY EQUIPMENT ON THE WADOWICE STATION STAGE II

The project received a Certificate of Appreciation in the Construction of the Year Competition 2008

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **PRK Kraków SA**
Contract period:
21.05.2007 – 31.05.2008
Gross contract value:
PLN 16 980 187,81

Contract aim:
The aim of the project was the modernisation of the Wadowice station in order to adapt it to handling increasing tourism.

Contract specification:
Railway works:
– assembly of tracks from S49 rails – 1.36 km
– assembly of traditional S49 railroad switches – 6 sets
– construction of the Mirosław Ujski passage – 115.44 m²
– replacement of classical rails to jointless rails – 0.46 km
– replacement of wooden sleepers to concrete sleepers

Overhead lines:
– reconstruction of overhead lines: single and double wire

Rail traffic control:
– reconstruction of rail traffic control equipment

Engineering works:
– renovation of rail bridges on km 17.930
– expansion of the pedestrian tunnel from prefabricated elements together with the assembly of platforms for the disabled – 25 m
– reconstruction of platform No 1

3D works:
– construction of the dispatch offices together with equipment

Drainage works:
– construction of the French drain – 1,840 m²
– construction of the inspection chambers – 4 pcs

Energy-related works:
– reconstruction of external lighting of the area and platforms

MODERNIZATION OF THE RAILWAY LINE E 20, SECTION SIEDLCE-TERESPOL. STAGE I, LOT A SIEDLCE-ŁUKÓW KM 95.100 TO KM 118.450

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A. – Consortium Partner**
Contract period: **05.05.2006 – 27.12.2007**
Gross contract value: **EUR 60 716 913,64**

Contract aim:
The aim of this project was to improve the safety and adjust the line E-20 to technical standards, which allow passenger trains to reach the speed of 160 km/h, and 120 km/h in the case of freight trains.

Contract specification:
Design:
– design and as-built documentation

Railway works:
– assembly of tracks from UIC-60E1 rails – 49.936 km
– assembly of UIC-60 1:9 R=300 railroad switches – 16 sets
– liquidation of passages (10 pcs) and their reconstruction – 16 sets
– drainage of open unsupported ditches (6,535 running metres) and ditches supported with channels from Gara reinforced concrete (17,048 running metres)

Overhead lines:
– assembly of overhead lines – 51.064 km
– construction of trafo stations

Engineering works:
– construction of platforms together with small architecture – 14 sets
– construction of the railway bridge with the span of 12 m

3D works:
– renovation of buildings connected with rail traffic

Energy-related works:
– electrical heating of railroad switches
– reconstruction of non-traction lines – 25.128 km

MODERNIZATION OF RAILWAY LINE E-30, SECTION WĘGLINIEC – BIELAWA DOLNA AS PART OF THE PROCENT ISPA NO 2001/PL/16/P/PT/016

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor:
PRK Kraków SA – Consortium Leader
Contract period:
10.05.2005 – 14.12.2007
Gross contract value:
EUR 20 022 176,99

The project received a Certificate of Appreciation in the Construction of the Year Competition 2007

Contract aim:
The aim of this project was to improve the safety and adjust the line E-20 to technical standards, which allow passenger trains to reach the speed of 160 km/h, and 120 km/h in the case of freight trains.

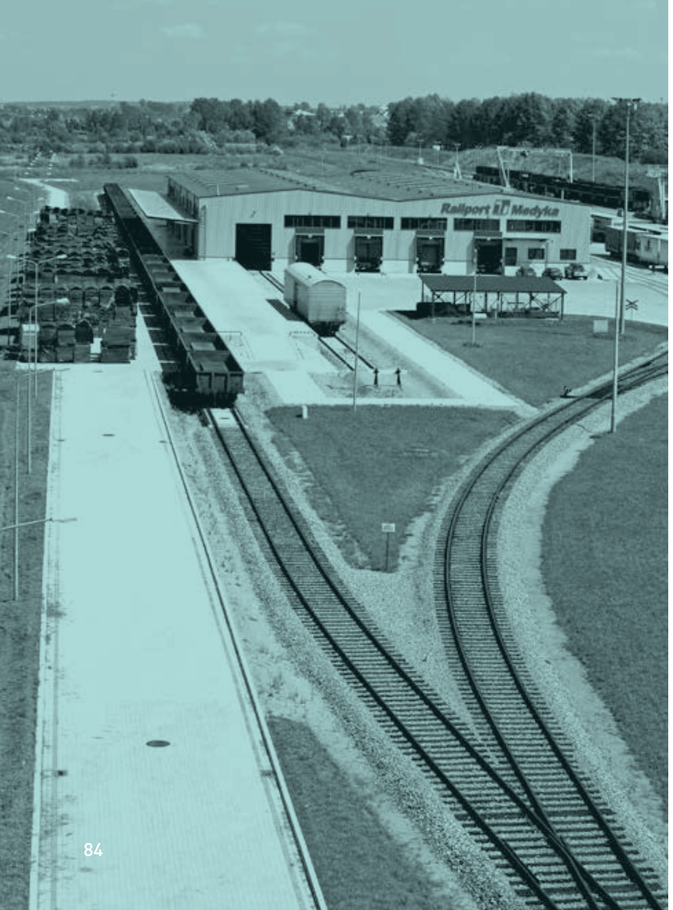
Contract specification:
Railway works:
– laying of tracks from UIC60 rails on pre-tension concrete sleepers PS94 – 23.429 km
– assembly of traditional railroad switches – 4 pcs

Overhead lines:
– assembly of overhead lines – 85.755 km
– assembly of traction posts – 373 pcs

Rail traffic control:
– assembly of rail automation equipment – 3 sets

Engineering works:
– construction and modernization of culverts and overpasses – 10 pcs
– protection of embankments from landslides

Energy-related works:
– construction of non-traction lines
– power engineering to 1 kV



CONSTRUCTION OF THE BORDER SERVICE CENTRE IN MEDYKA

Investor:
Trade Trans Sp. z o.o.

Contractor: **PRK Kraków SA**
Contract period: **09.08.2006 – 15.05.2007**
Gross contract value: **PLN 34 259 402,32**

This project was awarded
the 2rd Degree Prize in the Construction
of the Year Competition 2007

Contract aim:
The aim of this project was the construction of the first Polish Railport (with the load capacity of 520 thousand tons and the area of 13 ha on the rail border crossing with Ukraine and Medyka) and one of 18 operational in Europe.

Contract specification:
Railway works:
– reconstruction of 4 km of S49 railway station tracks: 1.5 km with 1,435 mm of normal clearance and 2.5 km with 1,520 mm of wide clearance,
– laying of railroad switches on normal track (2 sets) and wide track (4 sets)
– construction of passages from prefabricated crossing plates

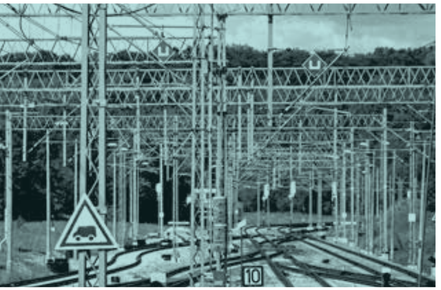
Road works:
– construction of parking spaces from concrete blocks
– construction of fences around the Service Centre together with road and rail gates with remote control
– construction of storm water drainage from PVC pipes

3D works:
– construction of objects together with the necessary internal installations (administrative building, electromechanical workshop, warehouse hall, liquid gas storage)
– construction of truck scale together with ramps – 82.8 m²

Telecommunication works:
– construction of cable ducting
– construction of telecommunication network and TVU
– construction of telecommunication connections to Border Service Centre in Medyka

Installation works:
– water supply connection and network
– sanitary connection and network

Energy-related works:
– external lighting



COMPREHENSIVE RECONSTRUCTION OF THE OVERHEAD LINES OF THE TRACK NO. 2, KONIECPOL TURÓW SECTION OF THE RAILWAY LINE NO. 61 KIELCE – FOSOWSKIE AS PART OF THE INVESTMENT TASK "REVITALISATION OF THE RAILWAY LINE NO. 61 AND 572, WŁOSZCZOWA PÓŁNOC – CZĘSTOCHOWA STRADOM SECTION"

Investor:
CTL Service Sp. z o.o.

Contractor: **ZUE S.A.**
Contract period: **29.11.2013 – 28.11.2014**
Gross contract value: **PLN 24 280 200**

Contract aim:
The aim of the contract was the improvement of the safety performance as well as providing a safe and continuous train movement while maintaining the optimal route throughput by restoring the original, basic technical-operational parameters on the revitalized railway line No. 61 in connection with the planned IC Premium class trains movement.

Contract specification:
Overhead lines:
– disassembly of the existing overhead lines of the YC95-2C, YC120-2C type on Vmax 160 km/h – 28.141 km
– assembly of the YwsC120-2C overhead lines – 28.141 km
– installation of support structures (483 pcs.), gates (2 pcs.), half-gates (6 pcs.) and poles (475 pcs.)
– assembly of the pile foundations – 604 pcs.
– installation of anti-theft monitoring with SIM cards

DESIGN DOCUMENTATION AND CONSTRUCTION WORKS AS PART OF THE TASK: „MODERNISATION OF A RAILWAY LINE NO. 274 WROCŁAW – ZGORZELEC, WROCŁAW – JELENIA GÓRA SECTION" – MODERNISATION OF THE OVERHEAD LINES ALONG WITH ACCOMPANYING WORKS, TRACK NO. 2 SMOLEC – KĄTY WROCŁAWSKIE SECTION

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A.**
Contract period: **17.09.2012 – 31.05.2013**
Gross contract value: **PLN 11 308 976,70**

Contract aim:
The aim of the contract was a comprehensive reconstruction of the railway electrics of the railway No. 274 Wrocław – Zgorzelec on the Wrocław – Jelenia Góra section – modernisation of the overhead lines adjusted for train movement at the speed of V = 160 km/h.

Contract specification:
Overhead lines:
– assembly of the overhead lines of the YwsCI20-2C-M type on Vmax 160 km/h – approx. 10 km
– assembly of the pile foundations – approx. 240 pcs.
– assembly of the support structures – approx.180 pcs.
– assembly of the AFL6 1x120 mm2 group bonding system – approx. 10 km

RECONSTRUCTION OF THE RAILWAY INFRASTRUCTURE ON THE LINE NO. 61. KONIECPOL – TURÓW SECTION AS PART OF THE TASK „REVITALISATION OF THE TRACK NO. 1, RAILWAY LINE NO. 61"

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A. – Consortium Partner**
Contract period: **06.08.2012 – 28.03.2013**
Gross contract value: **PLN 21 586 500**

Contract aim:
The aim of the contract was comprehensive reconstruction of railway electrics of the railway line No. 61 Kielce – Fosowskie, section from 69.350 km to 94.262 km on the track No. 1 and the reconstruction of the overhead line network over the rail switch crossings at the Koniecpol and Julianka stations.

Contract specification:
Overhead lines:
– assembly of the overhead lines of the YwsC120-2C type on Vmax 160 km/h – 24.912 km
– assembly of the C95-C overhead lines network over the rail switches
– assembly of the support structures – 450 pcs.
– assembly of the pile foundations – 586 pcs.
– reconstruction of the non-traction facilities on the Koniecpol – Lustawice section

MODERNISATION OF THE RAILWAY LINE NO. 4 – CENTRALNA MAGISTRALA KOLEJOWA [CENTRAL RAIL LINE] MODERNISATION OF THE OVERHEAD LINES ALONG THE OLSZAMOWICE – WŁOSZCZOWA PŁN. SECTION PŁN. ON THE TRACK NO. 1 AND 2 OF THE RAILWAY LINE NO. 4 (CMK) GRODZISK MAZOWIECKI – ZAWIERCIE

Investor:
PKP Polskie Linie Kolejowe S.A.

Contractor: **ZUE S.A.**
Contract period: **04.03.2011 – 10.12.2011**
Gross contract value: **PLN 39 790 860,29**

Contract aim:
The aim of this contract was the modernisation of the overhead lines of railway line No. 4 (CMK) Grodzisk Mazowiecki-Zawiercie on the Olszamowice – Włoszczowa Ptn. from the 125.148 km to 151.986 km on the track no. 1 and no 2 adjusted to the speed of Vmax=200 km/h in the power supply system of 3kV DC, and in the future the implementation of overhead lines in the power supply system of 25 kV AC adjusted to the speed of Vmax=350 km/h.

Contract specification:
Overhead lines:
– assembly of the overhead lines of the 2C120-2C-3 type on Vmax 200 km/h – 53,676 km
– assembly of the pile foundations – 718 pcs.
– assembly of the support structures – 520 pcs.
– assembly of the group bonding system AFL-6

Photographs:
Archive of ZUE S.A.

Graphic design, DTP:
artprom.pl

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