



Presentation of

PCI INDUSTRIAL AUTOMATION GENERAL CONTRACTING AND CONSTRUCTION Co.

Name and business form of the Company:

2006	PCI INDUSTRIAL AUTOMATION GENERAL CONTRACTING AND CONSTRUCTION Co.
2004	PCI Industrial Automation General Contracting and Construction Co.
2003	PCI Industrial Automation Co.
1997	PC Process Control Ltd.
1982	Process Control Assoc.

Services and activities of the company:

General contracting:

- Turn key industrial facilities constructed in an EPC approach: hydrocarbon storage depots, loading and unloading gantries, process plant and service systems, “green field” facilities, automation systems, implementation of electric power supply and other facilities from engineering through authority permitting, to performing test runs.
- Supply of technical inspection functions (mechanical, electrical, process control and civil engineering through professionals registered in the trade registry of Hungarian Chamber of Engineers MMK).

Design and engineering:

- Technology design
 - process design
 - plant design
 - transport line distribution
 - environment protection, and securities
- Facility design
 - Equipment
 - Mechanical systems
 - Process control, high power computerized process management systems and equipment
 - Underground civil, route systems
 - Aboveground civil and steel structures
 - Heating, ventilation, air conditioning and communications

Construction:

- Process mechanical erection, fabrication and installation of steel structures
- Process control and electrical erection, fabrication of individual equipment

- Lab 1 and Lab 2 examination of metering loop components, manufacture, inspection, testing, site erection, commissioning and start-up of manufactured equipment, control cabinets and equipment
- PLC programming, DCS configuration, development of industrial process control software
- Performing construction functions under “special” conditions:
 - Installation of instruments, electrical products and valves of an EEx explosion proof protection design
 - Inspection of the erection of explosion proof products both periodically, and prior to their commissioning, with testing station certification PC-Ex for explosion proof electrical equipment, approved by Hungarian Mining Agency.

Site and resources:

On a nearly 3000 m² site within the premises of MOL Plc Danube Refinery (at Százhalombatta, Hungary) we have:

- offices and meeting rooms
- construction and maintenance erection halls
- roofed and closed warehouse rooms



The civil, mechanical, instrumentation, electrical inspectors and project managers of our *General Contracting and Projecting Section* are at the disposal of our customers with their experiences and references gained throughout many years within the premises of *MOL Group*.



Our professionals have got licences (issued by OKJ and registered in MMK Register) for performing the functions as follows:

- Responsible technical leader
- Inspector (in mechanical, civil, instrumentation disciplines)
- Technical leader to repair and operate explosion proof electrical equipment.

Construction Section

At present the site employs 150 persons who have been providing an outstanding and reliable performance within MOL Plc's facilities for decades, and have gained experience in oil industrial erection and maintenance works along with a proper knowledge of both the site and the unique specifications to be adhered to compulsorily at MOL Group.

For carrying out the functions we have our own sections for mechanical, instrumentation, electrical and machinery construction works, which are supported by project preparations and quality assurance groups.



Our efforts are assisted by properly equipped mechanical workshops, machinery, pool of calibrated instruments and a computerised records system.

From January 2008 a new section has been added to the company to perform process mechanical erection functions, which means both a 50 strong team of welders, fitters, erectors with all the trade knowledge and authorisations, and a plant equipped and fitted with all the necessary machinery, equipment and an excellent infrastructure.



Through this extension we can now carry out specific complex functions at a higher efficiency, within a more reduced sphere of responsibility, while making both the inspection of the task performance and the simple contact with the construction company easier to our esteemed customers.

Scope of activities

- Installation of industrial plants as a main contractor
- Construction of plants and equipment
- Complex maintenance works and revamping of industrial plants
- Erection and heat insulation of production machinery and pipelines
- Manufacturing, erection and heat insulation of vessels
- Manufacturing, installation of steel structures
- 3D-design of industrial systems
- Non-destructive testing (NDT)
- Special work (scaffolding and corrosion prevention)

Field of activities

The main field of activities of PCI Zrt. in Hungary is the following:

- chemical industry
- petrochemical and gas industrial plants
- conventional and nuclear power plants
- iron and steelworks



- pharmaceutical, food and nutriment processing industry
- car factories and their suppliers

Mechanical Assembly

- Assembly of technical piping
- Fabrication and assembly of steel structures
- Fabrication and assembly of tanks
- Assembly of rotating machinery, turbines, compressors and pumps
- Installation of equipments, machinery
- Assembly of complete industrial plant
- Insulation, surface protection and scaffolding

Maintenance

- Presence of specialists for maintenance at industrial facilities
- Major turnarounds for oil and chemical plants
- Shutdown activities in Hungary.

Detail engineering

Non-destructive material testing

Tank diagnostics

Quality assurance and certificates:

During our work the long term satisfaction of our customers and the maintenance of a good partnership are important.

Added to that – over and above our contribution of expertise and experiences – is the fact that our work is in compliance with the requirements of Standard MSZ EN ISO 9001:2001 in the areas of:

- Design, construction, maintenance and general management of industrial process control systems
- Process erection
In complying with the quality requirements set forth in Standard MSZ EN ISO 3834-2:2006 PCI Zrt can satisfy the special and additional requirements concerning the welding and welders as per Sections b) and c) of Para 2 in Decree No. 3/1998 IKIM and the requirements applicable to the site process erection, repair and leak testing of tanks used for storing liquids and melts, but not classified as pressure vessels.

Main certificates

1. Quality Management System MSZ EN ISO 9001:2009
2. Environmental Management System MSZ EN ISO 14001:2005
3. EN ISO 3834-2 TÜV Rheinland
4. DIN EN 1090-1, -2 EXC2 TÜV Rheinland
5. 11/1994.(III.25.) IKIM MKEH
6. 3/1998.(I.12.) IKIM MKEH

Contacts:

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Introduction to PCI Zrt. references between 2004 and 2017

(The list below is for a summary only)

PROJECT REFERENCE LIST 2004:

- Relocation of control room tag No. 174 (of HDS, GOK-2 and Claus-4 Units) to the control room of GOK-3 Unit (MOL Plc Projects – Attila Poszmik). Project value: HUF 158,810 thousand
- Process control construction works of Main Control Room, GOK-3 Unit MOL Plc (EMERSON Process Kft – István Baranyai). Project value: HUF 12,733 thousand
- Process control works for bottoms filter in FCC Unit, MOL Plc DR (Baumont '92 – József Szilágyi). Project value: HUF 210,057 thousand
- Revamp of feed filter in HDS Unit, MOL Plc Duna Refinery – under a general contract (MOL Plc Projects - Gábor Nagy). Project value: HUF 56,892 thousand
- Process control revamp on tank tag No. 20025, MOL Plc Duna Refinery (Pantech Kft – József Temesfői). Project Value: HUF 14,544 thousand
- Upper railway BT unloading gantry, MOL Plc DR – under a general contract (MOL Plc Projects – Judit Bánki). Project value: HUF 322,297 thousand
- Installation – mechanical, process control – of LPG loading gantry at track tag No. 153, MOL Plc DR (NOVOCHEM Kft – Elek Borsos). Project value: GHUF 114,100 thousand
- Process control revamp in Recycle Water Plant No.2, MOL Plc DR (Pörner Rt – László Béres). Project value: HUF 26,300 thousand
- Installing gas chromatographs on refinery natural gas and fuel gas systems in MOL Plc DR (MOL Plc – Géza Kőműves). Project value: HUF 7,659 thousand
- Installing flow meters in refinery slop network, MOL Plc DR (MOL Plc Projects – Sándor Máté). Project value: HUF 4,800 thousand
- Process control revamp of road bitumen loading gantry, MOL Plc DR (Pörner Kft – László Béres Deák). Project value: HUF 33,500 thousand
- Development, design and construction of local operation of circulating and return pumps in Újpest Power Plant of Budapest Erőmű Rt (BERT – Imre Patkó). Project value: HUF 3,995 thousand
- Display and operation of bypass controls for three control valves in Damatic XDI DCS system for Ganz Danubius Hungarosteel Kft (GDSh Kft – Gábor Földesi) Project value: HUF 2,600 thousand
- Explosion volume classification for slop tanks tag Nos. 101 and 102 in Upper Railway Loading Gantry, MOL Plc DR (Explant Kft – György Reho). Project value: HUF 200 thousand
- Power supply and process control construction works on bunker ship, MOL Plc Base Terminal at Csepel (Erőszolg Bt – Csaba Tóth). Project value: HUF 4,900 thousand
- Relocation of gas flow metering and calibration station for Fővárosi Gázművek Rt (Flowmet Kft – Sándor Kun). Project value: HUF 3,003 thousand
- Modification of air controllers on gas boiler burners for Újpest Power Plant if Budapest Erőmű Rt in the DCS (Enprima Rt – István Bocsor). Project value: HUF 200 thousand
- Explosion safety review of Ex electrical equipment installed under project Installation of filter differential pressure transmitters in Automatic Road Tanker Loading gantry, MOL Plc Logistics in accordance with the specifications of Standards MSZ EN 50014, 17, 18, 19, 20 and 28, and MSZ EN 60079-10, 14 and 17 prior to their commissioning.



PROJECT REFERENCE LIST 2005:

- Process control construction works in BEK-5 Unit, MOL Plc DR
- Construction works in BEK-5 Unit Satellite Control Room, MOL Plc DR.
- Explosion safety review of Ex electrical equipment installed under project Bitumen road loading gantry process control revamp, MOL DR in accordance with the specifications of Standards MSZ EN 50014, 17, 18, 19, 20 and 28, and MSZ EN 60079-10, 14 and 17 prior to their commissioning.
- Explosion safety review of Ex electrical equipment installed under project process control and electrical construction works – Converting MTBE Unit to ETBE production, MOL Plc DR in accordance with the specifications of Standards MSZ EN 50014, 17, 18, 19, 20 and 28, and MSZ EN 60079-10, 14 and 17 prior to their commissioning.
- Pump P111-A replacement project, DC Unit, MOL Plc DR. Project value: HUF 6,463 thousand
- Process control and electrical works for fumaric acid production, MSA Unit, MOL Plc (SZERSZIG Kft) Project value: HUF 12,887 thousand
- Process control works for tower 400 V1 reconstruction in FCC Unit, MOL Plc DR (Petrolszolg Kft) Project value: HUF 11,432 thousand
- Developing two streams in the benzene and toluene system of the ABB analytics in Aromatics Unit, MOL Plc (ABB Kft) Project value: HUF 9,537 thousand
- Level gauging – design and construction - on catalyst tanks tag Nos. 400-V3 and V4 in FCC Unit, MOL Plc DR. Project value: HUF 1,757 thousand
- Replacement of atmosphere analysers in Duna Refinery and Tisza Refinery, MOL Plc. Project value: HUF 18,115 thousand
- Integrating Make-up Water Unit and Recycle No. 2 into MSA Unit – process control construction, MOL Plc. Project value: HUF 15,036 thousand
- Process control works on off-sites for gasoline vapour recovery unit of Barge Loading Station MOL Plc DR. Project value: HUF 13,514 thousand
- Design and construction of orifice plates and thermometers during enlarging blower train Side “B” and discharge line in Bitumen Production Unit, MOL Plc DR. Project value: HUF 1,900 thousand
- Process control works associated with replacement of motors P303/I-1 in AV-2 Unit, MOL Plc DR. Project value: HUF 5,400 thousand
- Process control construction work associated with installation of pump P101 C in HDS Unit, MOL Plc DR (SZERSZIG Kft). Project value: HUF 33,400 thousand
- Process control works associated with the revamp works on Road Bitumen Loading gantry, MOL Plc DR (Pörner Rt). Project value: HUF 69,500 thousand
- Process control construction works associated with year 2005 turnaround in Lube Oil Hydrotreating Unit, MOL Plc DR. Project value: 35,888 thousand
- Installation in place of filter tag No. F2001B in DC Unit, MOL Plc DR. Project value: HUF 1,909 thousand
- Installation of on-line gas analyser, its process control design and construction, MOL plc. Project value: HUF 7,659 thousand
- Conversion of interlock system in Lube Oil Hydrotreating Unit, MOL Plc. Project value: HUF 91,087 thousand. HP steam line in Hydrogen Plant 2, MOL Plc. Project value: HUF: 17,160 thousand.
- Developing fire protection system in Pécs base terminal of MOL Plc under a general contract. Project value: HUF 190,236 thousand.
- Process control works on gasoline vapour recovery unit for Barge Loading station, MOL Plc. Project value: HUF 13,439 thousand.



- Installing a CCTV camera system in Gasoline Blending Unit and MSA Unit, MOL Plc. Project value: HUF 10,219 thousand.
- Constructing gas oil product pipeline in HDS Unit, MOL Plc. Project value: HUF 28,989 thousand.
- Replacement of centrifugal pump tag No. 303/3 in AV-1 Unit, MOL Plc. Project value: HUF 11,500 thousand.
- Design of feed producer exclusion of base oil production, MOL Plc. Project value: HUF 13,448 thousand.
- Process control works associated with the replacement of motors P303/1-2 in AV-2 Unit, MOL Plc. Project value: HUF 5,035 thousand.

PROJECT REFERENCE LIST 2006:

- Improving and constructing loading capacities at road loading terminals remaining in service for Logistics, general contractor works, site reconstruction - mechanical, electrical and process control – for Algyő base terminal, MOL Plc.
- Installation of entry systems under Mess und Fördertechnik L Cotas project: Value: EUR 52,000
- Instrumentation revamps in BEK-4 Unit, DR HUF 39 M
- Replacement of flame eyes on fired heaters of REF-4 Unit HUF 25 M
- HDS Unit upgrade, MOL Plc DR HUF 52 M
- Replacement of fuel gas quick shut-off valves (18 off) in fired heaters in Aromatics Unit, MOL Plc DR. HUF 7 M.
- Revamp of fans tag Nos. 122-I/1-2 and 122-II/1-2 in MSA Unit, MOL plc HUF 2 M
- Tripping on gas detector for fresh air fans in DC Unit, MOL Plc DR. HUF 2 M
- Installation of H2S analyser in KGU Unit, MOL Plc DR. HUF 3.5 M
- Relocating Sieger central units in PU, GOK-1 and KGU Units, MOL Plc DR. HUF 2M
- Revamp of 5 acid valves in HF Unit, MOL Plc DR. HUF 6 M
- Maintenance works of February for Earth Tech Kft. HUF 1.5 M
- MSA Unit upgrade – electrical and instrumentation construction MOL Plc HUF 279M
- Integrating process control of Biological Treating Plant to RIS, MOL Plc COS Projects. HUF 2 M
- Extension to road tanker loading site at Pécs (process control and electrical works) and Vép (demolishing) HUF 130 M
- Reconstruction of Column tag No.3/102 in Aromatics Unit, MOL Plc, Pantech Kft. HUF 3 M
- Extension to HP fire water network in LPG region MOL Plc DR. HUF 6 M
- Installing medical gas supply to sports surgical centre at Tata. HUF 9 M.

PROJECT REFERENCE LIST 2007:

- Upgrading Incinerator Plant in Duna Refinery MOL Plc, under a general contract. Value: EUR 3.4 M.
- Revamping API basins under a general contract in Biological Treatment Plan, Duna Refinery MOL Plc. Value: HUF 39 M.
- Loading slack wax and petrolates in Wax Production Unit, Duna Refinery MOL Plc. Value: HUF 35.4 M.
- Construction of instrumentation in Bio-diesel Unit, Rossi BioFuel Zrt in Komárom, Hungary. Value: HUF 65 M.
- Installing vapour recovery unit at Pécs base terminal, MOL Plc. Value: HUF 24 M.
- Renewing railway tanker car loading and engine barn for Füzesgyarmat, MOL Plc Logistics. Value: HUF 35 M.



- Installing filter on compressors C-1 and C2- in KGU Unit, Duna Refinery MOL Plc. Value: HUF 9.5 M.
- Ethanol blending for MOL Plc (MOL Plc). Value. HUF 97.6 M
- HDS Unit upgrade, Phase 2008 for MOL Plc (MOL Plc). Value: HUF 43 M.
- Developing dewatering for tanks 20001-3-6 in Duna Refinery MOL Plc (MOL Plc). Value: HUF 9.6 M.
- Removal of insufficiencies in Ex documentation, Stage 2, for MOL Plc Logistics (MOL Plc). Value: HUF 61 M.
- Installing Yokogawa Pro-Safe cabling and hard wired connection in Hydrogen Plant No. 1 Duna Refinery, MOL Plc (Yokogawa Hungária Kft). Value: HUF 6 M.
- Repairs to pneumatic units of road loading gantry in Bitumen Unit, Duna Refinery MOL Plc (Petrolszolg Kft). Value: HUF 21 M.
- Reconstruction of H2S sampling in KGU Unit, Duna Refinery MOL Plc (Petrolszolg Kft). Value: HUF 8 M.
- Reconstruction of oil trapping tank at base terminal Székesfehérvár, RMD Logistics MOL Plc (Petrolszolg Kft). Value: HUF 11.5 M.
- Tracing replacement on vacuum resid line at road tanker loading gantry, Duna Refinery MOL Plc. (Pantech Kft). Value: HUF 34.6
- Process control construction works on tail gas incinerating system of vacuum column in AV-1 Unit, Duna Refinery MOL Plc (MOL Plc). Value: HUF 18 M.
- Pumping station No. 211, revamp of product distribution Százhalombatta to Komárom (Vabeko Kft). Value: HUF 21 M.
- Replacement of Yokogawa back up PLC in REF-4 Duna Refinery NOL Plc (Yokogawa Hungária Kft). Value: HUF 8.6 M.

PROJECT REFERENCE LIST 2008:

- MOL Plc. AV-2 Unit, exchange of oil lances of furnaces, Value: HUF 109,6 M
- MOL Plc. Logistics, Reconstruction and engineering works according to Explosion proof documents (Removal of insufficiencies in Ex documentation, stage 4)., Value: HUF 62 M
- MOL Plc. Logistics, Reconstruction of oil trapping tank at base terminal Pálmonostora, Value: HUF 59,2 M
- MOL Plc. CP és CGA Rail loading Units mechanical and electrical reconstruction, Value: HUF 476,3 M
- MOL Plc. GOK-1 Unit reconstruction – electrical implementation, Value: HUF 62,6 M
- MOL Plc. GOK-1 Unit reconstruction – instrumental implementation, Value: HUF 96 M

PROJECT REFERENCE LIST 2009:

MOL Austria – Korneuburg, General reconstruction of base terminal, Value: EUR 11 M

PROJECT REFERENCE LIST 2010

- MOL Plc DR; installing a PSA system in compressor house No.541.
- MOL Plc DR, repair and maintenance work of electric gearboxes and reduction gears
- Revamp of Safety Storage and Recording System at Celldömök for OPAL Tartálpark Zrt. MOL Plc. DR, control engineering construction work of pump No. P801-C at GOK-3 unit
- MOL Plc DR, exchange of fire water system gate valve at HFA unit installation of DCS cabinets within G3 project for Dunamenti Erőmű Zrt.



- MOL Plc DR, control engineering work in connection with the installation of a condense water pump at HGY-1 unit
- MOL Plc exchange of an oxygen analyzer at REF4. unit
- MOL Plc; updating the interlock system at REF4, BEK4 units
- MOL Plc DR; control engineering work connected to AV-2 unit emission measurement
- MOL Plc Logistics; construction work in relation with authority instructions at CP and CGA loading stations
- MOL Plc Eiffel project phase III; installation and commissioning of a HYDROCOM system at GOK-1 unit(with Hoerbiger Kft.)

PROJECT REFERENCE LIST 2011

- MOL Plc DR, repair and maintenance work of electric gearboxes and reduction gears
- MOL Plc BTK unit; implementation of gasoil flush solution - construction of motor valves MOL Plc DR; reconstruction of discharge and delivery pipes of pump No.262/308 at FGK unit, installation of new motor valves..
- MOL Plc Zala Refinery; Rubber bitumen manufacturing project
- Nagylengyel Enrac Project NLT-3 gathering station construction
- MOL Plc Shell additivation
- MOL Plc SEVESO II. project in Komárom
- OILTECH Kft. Babócsa-Fánimajor primary fire protection and security – electrical construction work
- MOL Plc GTK unittank yard No. 201 installation of emergency shut-down valves
- MOL Plc. BEK-4/REF-4 units; feedstock supply reconstruction work
- Szank ENRAC project high level control engineering work
- MOL Nyrt. Hydrogen Plant ; construction of N2 flushing at the PSA adsorber
- MOL Plc Zala Refinery Odour Emission Reduction
- OPÁL Zrt. Pétfürdő operation optimization
- MOL Plc Gomba field development; Füzesgyarmat
- MOL Plc Komárom site ; VRU construction work
- MOL Plc. BEK-5 unit installation of a sulphur content analyzer
- MOL Plc. Biological Water Treatment unit installation of motor valves
- MOL Plc. DC unit repair and maintenance work of electric gearboxes.

PROJECT REFERENCE LIST 2012

- MOL Plc. reconstruction and maintenance work of KGÜ unit Control engineering work.
- MOL Plc DR; Reforming block units; mechanical reconstruction work during the general overhaul in 2012. .
- Installation of emission measurement system in Dunaföldvár.
- MOL Plc DR AV-1 unit; construction work (during the general overhaul - Minor Projects Implementation).
- MOL Plc DR HDS unit floor construction of fired heater tag No. O-401 j. Control engineering design and implementation work.
- MOL Plc Logistics; reconstruction of Csepel railway loading equipment– control engineering and electrical implementation work.
- OPAL Zrt. Pétfürdő, construction of a tank car loading system; control engineering implementation work

- MOL Plc DR; exchange of valves and fittings at Recirk-2 water plant and network – control engineering and electrical implementation work
- Üllés increase of yield project- Algyő and Üllés gas intake into Szank Gas Plant.
- MOL Plc Logistics-II PROJECT Algyői site
- MOL Plc DR E-1 „A” és „B” heat exchanger construction at DAR unit
- MOL Plc DR DAR-2 unit design and implementation work of BFR pumps and electric motors tag No.301/1 and
- MOL Plc AV1 unit SIL Project; mechanical and control engineering construction
- MOL Plc DR HDS unit SIL Project; mechanical and control engineering construction
- MOL Plc Zala Refinery DCS exchange; control engineering implementation work
- MOL Plc DRElectrical and control engineering reconstruction work of tanks No. 533, 534, 535
- MOL Plc Corporate Services Facility Management; reconstruction of fire alarm system, construction of lines at Csepel site,

PROJECT REFERENCE LIST 2013

- MOL Plc. LOG Zalaegerszeg: Reduction of odor emission at rail tank car loader & unloader station – Transfer of oily wastewaters to closed system
- MOL LOG: Revamp of fire alarm systems at the Székesfehérvár & Komárom pipeline terminals.
- Novochem Ltd. Process system installation works of chemicals store & unloader at Százhalombatta.
- MOL Plc. Danube Refinery: Recirculated cooling water plants REC 1-3 revamp projects –Execution of electrical & instrumentation installation works.
- MOL Plc. Danube Refinery: Execution of electrical & instrumentation installation works in the course of the REC 2 EPC project.
- MOL Plc. Danube Refinery: Crude oil storage tanks reconstruction project – electrical & instrumentation works for tank No. 40004 in tank farm No. 203.
- MOL Plc. Danube Refinery: execution of modification for the instrumentation of the LP steam header in sulfur recovery unit Claus-4.
- MOL Plc. South Transdanubian product pipeline: Reduction of interface volume as the main contractor (specialist engineering, civil, mechanical, electrical & instrumentation works).
- MOL Plc. Logistics: Electrical & instrumentation works for the replacement of slop oil tanks AVT101 & TAT21.
- MOL Plc. Flagship Security - Tiszaújváros site – Installation of CAS & CCTV systems for the personnel and goods gates.
- MOL Plc. Block 59: Pump-yard revamp project; reconstruction of pumping station, electrical & instrumentation installation works.
- MOL Plc. Danube Refinery: Electrical & instrumentation works for the construction of a cross-connection between basins at the make-up water plant.
- MOL Plc. Danube Refinery: Pump efficiency improvement project – Design, procurement, delivery, installation & commissioning of frequency converters; execution of related electrical & instrumentation works.
- MOL Plc. Facility Management: Reconstruction & installation of fire alarm systems at Fényeslitke, Hajdúszoboszló, Kardoskút, Nagykanizsa & Zalaegerszeg.
- MOL Plc. Danube Refinery: Procurement & installation of on-line monitoring devices in the scope of the corrosion protection updating project.
- MOL Plc. Danube Refinery: Construction 42 kg/h capacity plastic pilot cracking unit as the main contractor (execution of specialist engineering, civil, mechanical and electrical & instrumentation works).



- MOL Plc. Danube Refinery: Execution of electrical & instrumentation installation tasks for the replacement of valves in the piping system of the Recirculated Cooling Water Plant.
- MOL Plc. Danube Refinery: Efficiency improvement in hydrogen production plants – Reconnection of ROG PSA purge gas to Hydrogen Plant HGY-2 as the main contractor (execution of specialist engineering, civil, mechanical and electrical & instrumentation works)
- TVK Plc. Excess hydrogen utilization in the TVK Power Plant – installation of interplant hydrogen line, instrumentation & power supply.

PROJECT REFERENCE LIST 2014

- MOL Danube Refinery: Residue processing, execution of optional works on tanks No. 546 & 1067 in the scope of year 2014 revamp, maintenance & repair activities in Asphalt Blowing Unit.
- MOL Danube Refinery: Execution of flare gas recovery implementation works in FCC fluid catalytic cracker, GOK3 distillate & BEK5 gasoline hydrodesulfurising units.
- MOL Plc. Tiszaújváros Refinery: Implementation of anti-override protection (installation of BIZ-BER monitoring, regulating, signaling & interlocking devices) and surface coating at tracks No. XII & XIII in the automated rail tank car loading station.
- MOL Plc. LOG: Kecskemét terminal – Execution of revamp works (design & construction) on storage tanks 501 & 502.
- MOL Plc. LOGISTICS: Friendship I crude oil pipeline replacing reconstruction project – Execution of design & construction works for DRA Drag Reduction Agent injection equipment.
- MOL Plc. Logistics: Komárom Terminal – Inspection of storage tanks 5001, 5021, 20002 & 20004 and execution of design & reconstruction works.
- MOL Plc. Danube Refinery: MEK Unit – Execution of VOCR equipment installation works.
- MOL Plc. Danube Refinery: Design of caustic injection system installation and execution of construction works in AV-1 atmospheric & vacuum distillation unit.
- MOL Plc. Logistics: Partial revamp of ÜFR Pipeline Operations Supervision System.
- Nitrogénművek Zrt (Nitrogen Works LLC): Construction of Neutralizing Unit S2 – Execution of instrumentation installation works.
- Petrolszolg Single-Service Ltd. Execution of works related to fired heater optimization.
- Hankook Tire Factory: Execution of site installation works for the instrumentation system related to expansion phase 3.
- TVK Butadiene, Hungary: Supply of bulk materials for project TVK-Butadiene
- MOL Plc. Logistics, Szajol Terminal: Design of electrical & instrumentation systems and execution of installation works in connection with the revamp of storage tanks 5005, 5007 & 5008.
- MOL Plc. LOGISTICS: Friendship I crude oil pipeline replacing reconstruction project – Execution of design & construction works for the reconstruction of the pumping station of the Adriatic pipeline.
- MOL Plc. Danube Refinery: Pump efficiency improvement project – Installation of new pumps & electric motors in replacement pump 301/1 in gas oil hydrotreater GOK1 and pump P205/C in HDS hydrodesulfurization unit; execution of mechanical construction activities for process piping installation and all electrical & instrumentation work related to the project.
- TVK Plc. 61.0304_14: Renewal & replacement of underground piping lines & valves; execution of mechanical process system installation works.

- MOL Plc. Logistics, Szajol terminal: Design of electrical & instrumentation systems and execution of inspection & installation works in connection with the revamp of storage tanks 5016 & 5020.
- MOL Plc. Danube Refinery: Execution of electrical & instrumentation works related to the revamping of the bitumen rail tank car loader.
- MOL Plc. Installation of mechanical (piping) electrical & instrumentation systems for the FIN Shell nitro diesel additive dosing equipment and the execution of other supplementary activities related to the main scope of work.
- MOL Plc. Logistics, Szajol terminal: Design of electrical & instrumentation systems and execution of inspection & installation works in connection with the revamp of storage tanks 20002 & 20010.
- MOL Plc. Logistics: Fényeslitke pumping station revamp project, Phase 3 - Replacement of pressure control valve actuators, execution of electrical & instrumentation systems installation & erection works; preparation of the design engineering documents serving as the basis for the work.
- MOL Plc. Danube Refinery: On-line corrosion monitoring project Phase II - Execution of field installation & erection works for the electrical system.
- MOL Plc. Danube Refinery: Execution of the construction activities specified for the project entitled "Satisfaction of SIL & MKEH requirements" mechanical, electrical & instrumentation systems installation works.

PROJECT REFERENCE LIST 2015

- MOL Plc. Danube Refinery: MSA Unit Efficiency improvement project as the main contractor (execution of specialist engineering, procurements, civil, mechanical and electrical & instrumentation works).
- MOL Plc. Danube Refinery: DCDU AV-2 Unit Efficiency improvement project as the main contractor (execution of specialist engineering, procurements, civil, mechanical and electrical & instrumentation works).
- MOL Plc. Logistics: Szajol Terminal – Inspection of storage tanks 20012 and execution of design & instrumental reconstruction works.
- MOL Plc. Danube Refinery: Execution of the construction activities specified for the project entitled "Satisfaction of SIL & MKEH requirements" mechanical, electrical & instrumentation systems installation works – DCDU AV-3, DCDU HGY-1 Units
- MOL Plc. Danube Refinery: Efficiency improvement project of tube furnaces in AV-3 GOK-3 Units: Assembly of TDLS analyzers, electrical & instrumentation works.
- MOL Plc. Danube Refinery: Fired heaters reconstruction project in AV-3 Units as the main contractor: (execution of specialist engineering, procurements, civil, mechanical and electrical & instrumentation works).
- Partial services "Implementation of mechanical and process control development covering selective removal of hydrogen sulfide content from natural gas using NaOH solution scavenger at the collection station "Üllés" as part of the development area "Selective removal of hydrogen sulfide content from natural gas (using NaOH)"
- MOL Plc. Danube Refinery MSA unit capacity expansion, EPC works
- MOL Plc. Szajol storage location Tank No. 5005 jacket repair works
- MOL Plc. Logistics Szajol storage location Tank No. 5001 inspection and reconstruction works
- MOL Plc. Danube Refinery PAM UNIT PROPANE PUMP 302/2 DRIVE REPLACEMENT
- Mol Plc. Logistics Komárom Decommissioning of the underground tank S1 and S2 tank piping modification

- MOL Plc. / LOG / Százhalombatta–Szajol-Tiszaújváros 6”/8” product line implementation of Szajol connection, performance of mechanical and plant engineering installation and implementation works
- MOL Plc. Danube Refinery - DCU2 Efficiency improvement of fired heaters phase 3 – Implementation (EPC)
- MOL Plc. scheduled tank maintenance activities 2015, reconstruction of the tank FOT 10012
- MOL Plc. scheduled tank maintenance activities 2015, reconstruction of the tank BTK 10011
- MOL Plc. Danube Refinery, FCC unit, instruments, electric and mechanical implementation works as part of bundle replacement and modification of the flue gas economizer 420E1
- Hamburger Hungária Ltd. process control implementation as part of the construction of a multi-fuel plant
- TVK Butadién plant, Public address system
- MOL Plc. Danube Refinery – Process control and mechanical implementation works as part of the project “SIL and MKEH conformity of the DAV3 plant and DHGY1 plant safety instrumentation and fuel systems”
- MOL Plc. furnace efficiency improvement project phase 2 – delivery of TDLs analyzers and related engineering services at the AV-3 and GOK-3 units and FDS preparation to improve efficiency of the AV-2 furnace, process control / instrumentation installation and implementation works
- MOL Plc. Danube Refinery AV-3 unit, performance of tube furnace burner replacement works
- MOL Plc. Danube Refinery Compliance – Design of control room thermometers, performance of installation works.
- MOL Plc. Danube Refinery Performance of general contractor services covering maintenance and repair works concentrating on instruments during a major interruption of the DAV3 and F DHGY units.
- MOL Plc. Corrosion Protection Recovery Project – Danube Refinery GOK3 Establishment of inhibitor dosage point – design and implementation work
- MOL Plc. Installation of a methanol dosage pump at the collection station Beru-1 (performance of mechanical and plant engineering installation and implementation works)
- MOL Plc. Exploration and Production, Performance of mechanical and plant engineering installation and implementation works covering the installation of the Algyő CC2 cooling water circulation pump for the Production South Hungary
- MOL Plc. Danube Refinery Corrosion Protection Recovery Project – DUF AV3 plant, washing water dosing system installation – performance of implementation works
- MOL Plc. Performance of process control site implementation works within the project “Plant supervision system advancement, improvement of leakage detection accuracy”
- MOL Danube Refinery HDS unit – Performance of instrument design and implementation works at the newly installed furnace O-404
- Performance of electric works at the tanks No. 5013 and 20029 as part of the project Inspection and reconstruction of the tanks 5013, 20029 at the MOL Plc. Danube Refinery premises.
- Performance of implementation works covering the installation of load regulation for the compressors C2, CC2 stages I and II at Algyő for MOL Plc. Production South Hungary
- MOL Plc. Logistics; Performance of reception slop system reconstruction works at the Szajol storage location and the performance of other auxiliary works in connection with the main activities



- MOL PSM Project – Performance of Opralog extension works
- MOL Danube Refinery hydrogen plant; replacement of Safety relay logic. Performance of Safety PLC site process control implementation works

PROJECT REFERENCE LIST 2016

- MOL MPK Inc. SSBR Project, Tiszaújváros, design and construction of external piping connections, process control and communication works, EPC works
- Üllés, natural gas hydrogen sulfide removal equipment, implementation of mechanical and process control development
- MOL Plc. Danube Refinery MSA unit , performance of capacity expansion works
- MOL Plc. Logistics Szajol storage location; performance of inspection and reconstruction works of tank No. 5001
- MOL Plc. DCUD-2 Efficiency improvement of fired heaters
- MOL Plc. Danube Refinery Alternative crude oil addition project, inspection and reconstruction works of tank No. 20007
- MOL Szajol, reconstruction implementation works of the atmospheric storage tanks No. 1001 and 1002
- MOL Plc. Logistics, Adria pumping station, tank No. 30002 reconstruction, site electric and process control implementation works
- MOL Plc. Danube Refinery, reconstruction implementation works of the atmospheric storage tank No. 5005
- MOL Plc. Danube Refinery, AV-2 unit, complete DCS replacement – EPC general contractor works.
- MOL Plc. Efficiency improvement of fired heaters at the Danube Refinery Phase 3 AV-2 unit – EPC general contractor works.
- MOL Plc. Danube Refinery MSA unit capacity expansion, EPC general contractor works
- Hamburger Hungaria Kft. Dunaújváros, establishment of a small power station, process control implementation works
- MOL Plc. Pipeline product transportation, plant supervision system advancement, improvement of leakage detection accuracy – electric and process control implementation works
- MOL Plc. Danube Refinery HDS unit – electric and process control design and implementation works at the newly installed furnace O-404
- MOL Plc. Danube Refinery, development of online analysis systems – electric and process control implementation
- Martfű Bunge – emission measuring station establishment – electric and process control implementation
- MOL Plc. Danube Refinery, flare gas measurement system reconstruction – electric and process control implementation
- MOL Plc. Danube Refinery, emergency alarm system, public address system extension – EPC general contractor works
- MOL Plc. Danube Refinery, installation of emergency shut-off valves – implementation works
- MOL Plc. Danube Refinery, process control maintenance and repair works of normal and critical units during the 2016 major interruption
- MOL Plc. Danube Refinery, RF4 unit, H21-24 furnaces burner replacement – general contractor works
- Nitrogénművek Inc. Pétfürdő, establishment of battery limit measurement points – process control implementation works

PROJECT REFERENCE LIST 2017

- MOL Plc. Logistics, performance of In line bio blending technology implementation at the MOL Plc. Danube Refinery storage location, instrumentation and electric implementation works at the Szajol and Komárom storage locations.
- MOL Plc. Logistics, Danube Refinery, inspection and reconstruction works of the tanks No. 572 and 573 (repair, reconstruction, construction and reconstruction implementation works of atmospheric storage tanks)
- MOL Plc. Danube Refinery, extinguishing water network reconstruction – performance of pipe section cleaning works
- MOL Plc. Danube Refinery, extinguishing water network reconstruction – performance of pipe section cleaning and lining works
- MOL Plc. Logistics, Danube Refinery, bursting disc replacement works at the measurement point No. 215
- MOL Plc. Danube Refinery, CL4 unit, V4 heat exchanger manufacturing and installation works
- MOL Plc. Danube Refinery, Claus 4-5-6 and FCC units online air monitoring system design and implementation works
- Nzrt. Pétfürdő, fertilizer unit reconstruction, process control implementation works
- MOL Plc. Organizational Efficiency Project Program implementation 3., performance of works
- MOL Plc. Danube Refinery; implementation works at the DBK2 unit in connection with the SIL 2.5 project
- MOL Plc. Danube Refinery; implementation works at the OKF unit in connection with the SIL 2.5 project
- MOL Plc. Danube Refinery frequency converter replacement – DR project phase 1 and related works
- MOL Plc. establishment of generator feed lines at the KTÜ breaker stations. Fényeslitke Pump Station, electric and process control cable replacement works
- MOL Plc. Danube Refinery; FCC unit instrumentation and electric works in connection with the reliability improvement project during the 2017 major interruption
- MOL Plc. Danube Refinery HGY-2 unit, installation works of the E-228 process gas air cooler
- MOL Plc. Danube Refinery, mechanical, instrumentation and electric reconstruction implementation works of the atmospheric storage tank No. 10044
- MOL Plc. Danube Refinery, industrial network update implementation works
- MOL Plc. Danube Refinery, electric and process control implementation works in connection with the DGHT3 project
- MOL Plc. Danube Refinery boiler plant burner replacement and reconstruction – implementation works, reconstruction of the boilers No. 501 and 401
- MOL Plc. Zala Refinery, Organizational Efficiency Project Program, one-man boiler supervision implementation works
- MOL Plc. Danube Refinery, furnace efficiency improvement phase 4, FCC H1 furnace TDLS” project implementation works
- Dunamenti Erőmű Inc. G3 heat recovery steam generator, design and implementation of electric heat tracing of pulse lines
- MOL Plc. Refinery, Százhalombatta, FGK tanks (10033, 10038, 10039, 10045, 20037, 20038), tank ventilation electric heating works and other auxiliary works in connection with the main activities



Servicing and maintenance works performed on a continuous basis

For Petrolszolg Kft: Complete instrumentation maintenance and repair of supplying, receiving and pumping stations and gate valve yards along MOL product distribution lines, managing their calibration with national metrological agency OMH (48 depots and 20 cathodic stations):

- Repair to and maintenance of electrical drives Type Rotork, Auma, Bernardt and Fahlke, their explosion safety inspections
- Repair to and maintenance of process control equipment, their explosion safety inspections
- Repair to and maintenance of Ex pump control devices and their explosion safety inspections.
- Repairs to and maintenance of pressure protection on feed pumps, their explosion safety inspections.
- Mechanical and electrical maintenance in the gate valve yards, explosion safety inspections therein
- Repairs to and maintenance of metering loop components, their explosion safety inspections.
- Shock protection inspections, RLC measuring, cable insulation tests
- Maintenance, repair and explosion safety inspection of gas concentration sensors installed
- Maintenance of process controlling computers and PLC hardware and software
- Repairs to and maintenance of UPS units.
- Repairs to and maintenance of tank level gauges on the overfilling protection system at the tank farm at Csepel terminal, managing their calibration by metrological agency OMH.

For LINDE Hungary Rt: Operating contract for Inert Gas Plant at MOL Plc DR Százhalombatta: supply of technical engineering supervision to ensure continuous operation round the clock, and maintenance and troubleshooting for software, hardware and process controls

For Petrolszolg Kft: performance of process control instrumentation works associated with annual plant turnarounds in MOL Plc DR units at Százhalombatta.

For Dunastyr Rt: Performance of process control works associated with annual turnarounds in the Polystyrene Plant at Százhalombatta, and troubleshooting occasional failures.

For EARTH TECH Hungary Kft: Provision of technical supervision to ensure continuous operations of process units operated by them within DR premises at Százhalombatta, their process control maintenance and troubleshooting.

Százhalombatta, 01/12/2017.