

REQUIREMENTS FOR CONTRACTORS

performing maintenance, reconstruction, installation works of AB ORLEN Lietuva process facilities

I. Contracting company shall provide the following minimum amount of information for the bidding:

1. A certificate issued by an authorized body of the Republic of Lithuania to perform maintenance and installation works of respective potentially dangerous facilities.
2. A certificate for operation of energy equipment issued by State Energy Inspectorate.
3. A list of available documents and normative acts that the company follows when performing equipment maintenance.
4. A list of Work Managers (welding works, quality control, flange connection assembly) who take part in equipment maintenance, reconstruction, installation works and copies of certificates which validate their qualification.
5. List of staff trained to install flange connections using dynamometric wrenches:
 - Workers who are responsible for installation of flanged connections (of equipment, pipelines, etc.) must be trained for this work and assigned personal numbers for labelling and certificates. AB ORLEN Lietuva training course *Safe Operation of Flange Connections. Installation of Gaskets* is recommended.
6. A list of welders and copies of qualification certificates. (certification in accordance with either EN 287-1+AC or EN287 + PED 97/23 EC). A list of welding equipment by indicating their technical specifications (welding machine, brim preparation equipment, thermal treatment, preheating, measuring tools, welding stencils, contact thermometers, dynamometric wrenches, etc.). The list shall indicate only the electrical equipment, gas pressure gauges and hoses, dynamometric wrenches with valid inspection (testing) documents or labels.
7. A list of procedures (instructions) for the work performed.
8. Copies of all available licenses and certificates of the company, giving proof to quality assurance system application.
9. A list of all available descriptions of welding procedures (WPS) and their verification protocols. (WPQR according to EN ISO 15614-1; 2004)
10. A list of subcontractors (If planned).

II. Before commencement of work:

1. Qualification test of welders shall be carried out irrespectively of their certification; the test shall be carried out by Welding Engineering Group of AB ORLEN Lietuva Plant Engineering Division.
 - submit application for the welder testing to Welding Engineering Group of AB ORLEN Lietuva Plant Engineering Division (Attachment 1).
 - a welder shall weld, in good quality, a required specimen in the presence of AB ORLEN Lietuva Welding Engineering Group representative, otherwise, the welder shall not be allowed of welding AB ORLEN Lietuva units.
2. A list of welders to be performing welding works shall be made up. The list to be approved by a representative of AB ORLEN Lietuva Plant Engineering Division Welding Engineering Group (Attachment 3).
3. The contractor shall develop the technology of units maintenance and reconstruction (Attachment 2), which would include diagrams and drawings. The technology shall be reviewed and approved by AB ORLEN Lietuva Chief Specialist of Equipment Technical Supervision and Chief Welding Specialist.

For the new construction piping, the welding work plan, reviewed and approved by AB ORLEN Lietuva Chief Welding Specialist, shall be provided.

4. The contractor shall make welding procedure descriptions for specific works. The welding procedure descriptions to be approved by AB ORLEN Lietuva Chief Welding Specialist.
5. The contractor shall make up the quality assurance plan of maintenance and reconstruction (Attachment 4). The plan to be reviewed and approved by AB ORLEN Lietuva Chief Specialist of Equipment Technical Supervision.
6. The list of staff to be installing flange connections, indicating their personal labelling numbers and supported with their certificate copies, shall be submitted to the Engineer of Equipment Technical Supervision.

III. During the work

1. The contractor shall be responsible for submitting orders of all inspections or non-destructive method control, steel chemical analysis in due time.
2. For the potentially hazardous equipment manufacturing, maintenance, reconstruction, and installation, the contractor shall use materials supported by initial quality control or identification certificates.
3. In its workplace, the contractor shall have the technology of maintenance or reconstruction, welding procedure descriptions, and quality control plan.
4. All works shall be performed strictly according to the project, technologies, welding procedure descriptions, and quality control plan. The specialists of Plant Engineering Division, having determined that the work fails meeting the requirements of aforementioned documents or its quality is not adequate, shall be entitled to discontinue the work.

IV. AFTER completion of work:

1. The contractor shall notify the engineer of Technical Supervision Shop and the mechanical engineer of the unit about the completion of maintenance works for the maintenance work quality inspection (external and/or internal inspection), hydraulic testing of the unit under maintenance with the representative from Technical Supervision Shop present.
2. Before the hydraulic testing of the unit, the representative of Technical Supervision Shop shall be provided with documentation (see Attachment 6).
4. The contractor shall submit the documentation (list thereof provided in Attachment 6) to the engineer of Technical Supervision Shop. The documentation shall comply with the requirements of normative/technical documents regulating maintenance and operation of respective units as well as the requirements of AB ORLEN Lietuva Procedures BM-4, BM-2. All maintenance deliverables to the Technical Supervision Shop representatives shall be submitted within 5 working days from the completion of the work.
5. Contractor shall be responsible for quality execution of unit maintenance in all cases irrespective of the inspection done by the representative from Technical Supervision Shop.
6. All assembled flanged connections shall be appropriately labeled, i.e. every assembled connection shall have a metal tag with an imprinted short name of the contractor, the individual flanged connection number of the worker, who assembled the connection, and the code of sealing material (see table below):

Paronite Asbestos free	Graphite	Metal	Metal rings	Spiral
P	G	M	Z	S

Example of the tag:

AR 45 G

AR – UAB Arimetas, 45 – individual number of worker, G – gasket material – graphite
If temporary gaskets are installed on a flanged connection, a red tag shall be placed.

7. The valve casing shall have an identification plate indicating valve No. and relative parameters DN/PN; if relative parameters are cast or imprinted on the casing and they are clearly seen, they do not have to be indicated in the plate. The valve plate shall indicate the company which repaired the valve. In case the valve does not have its number, a number shall be assigned by contractor. The same valve number shall be indicated in maintenance and test report (Attachment 5). “Close” and “Open” directions shall be indicated on the valve wheel.
8. Additional requirements to develop pipeline maintenance, reconstruction or installation documentation:
 - pipeline reconstruction documentation irrespective of the reconstruction work scope shall have whole piping diagram redrawn and new specification according to the requirements of Company Pressure Pipeline Safe Usage Instructions BM-4 shall be comprised. In case not all required data for unchangeable part of piping under reconstruction exists, the data necessity and volume shall be coordinated with Technical Supervision Shop; in case there is no piping technical certificate or it does not meet the BM-4 requirements, a new piping technical certificate shall be issued. The electronic version of piping diagram, specifications and piping technical certificate (passport) shall also be submitted to Technical Supervision Shop.
 - the piping technical certificate, diagram and specification according to the requirements of Company Pressure Piping Safe Usage Instructions BM-4 shall be issued in addition to the documentation of new piping installation. The electronic version of piping diagram, specifications and piping technical certificate (passport) shall also be submitted to Technical Supervision Shop.
9. All maintenance documentation and drawings shall be in Lithuanian language and computer version.

DEVELOPED BY: Chief Welding Specialist _____ V.Kumšlytis

Approved by:

Chief Specialist of Equipment Technical Supervision _____ L.Kočubeinik

Chief Mechanic _____ R. Šeputis

ATTACHMENT NO.1

Requester _____
Company name _____

Attn AB ORLEN Lietuva
Plant Engineering Division
Welding Engineering Group

ORDER REQUISITION FOR WELDERS' TEST

Date

Item No.	Name, surname	Welder's stamp	WPS No.	Certificate No.	Specimen data			
					Base metal type and group (CEN ISO 15608)	Diameter and thickness (mm)	Welding position (EN ISO 6947)	Welding method (EN ISO 4063)

Testing location, date and time _____

Requester's representative _____
Name, Surname, Position, Signature, Mobile Phone

Order received by _____
Name, Surname, Position, Signature

Note: Required certificate copy and welding procedure sheet (WPS) of welder must be added to order requisition.

ATTACHMENT NO. 2

TECHNOLOGY OF MAINTENANCE (RECONSTRUCTION)

(delete as appropriate)

No. _____

Technology of: _____
(Name and address of company)

Information about unit under maintenance (reconstruction):

Unit location _____
(Operations Division, number of unit and complex)

Unit name and technological No. _____
(indicate whether piping, pressure vessel, tank or lifting mechanism. Type of lifting mechanism.
AB ORLEN Lietuva set technological No. of the facility)

Registration No. _____ Serial No. _____

Technical parameters:

- a) *Medium _____
- b) *Pressure(bar) operating P= _____ maximum allowable pressure Ps= _____
- c) *Temperature (°C) operating Td= _____ Maximum or minimum allowable Ts= _____
- d) **Volume (m³) _____ **Height (m) _____ **Diameter (m) _____
- e) ***Lifting capacity (t) _____ ***Range or height (m) _____

* information to be indicated for piping, pressure vessels, tanks and sections thereof.

** information to be indicated for tanks and sections thereof.

*** information to be indicated for lifting mechanisms, cranes and sections thereof.

Justification for maintenance (reconstruction) _____

(Technical Inspection Report No. or Project No., Order No.)

Description of maintenance (reconstruction) _____

(short description of maintenance or reconstruction)

Order of maintenance (reconstruction) work priorities:

Sequence of work activities for each section of the unit under maintenance (reconstruction) with the indication of methods and equipment is laid down. Any additional actions (pre-heating, structure reinforcement, additional supports, etc.) used shall be mentioned. The description shall include references to respective Welding Procedure Specifications (WPS). If thermal treatment is used, the method shall be described (modes of thermal treatment, equipment used, area of heating, area and locations of heat-insulation, method of temperature control, points of temperature control). The flanged connections assembly sequence including the equipment and tightening torques of each flanged connection as well as the method of tightening control shall be put down.

Material selection for maintenance:

Information about all the materials used (pipes, sheets, fittings, auxiliary welding materials, pins, nuts, gaskets, etc.) shall be provided. Indicate what unit element or flanged connection the material is used for, name the element or the article, brand and type of material (the type applied standard), article standard. For the reconstruction, materials shall be indicated in the material specifications of drawings.

Maintenance diagrams and drawings:

All the spots under maintenance, welding and flanged connections shall be enumerated and indicated on the maintenance diagram. Dimensions of spots and elements under maintenance, distances from the spot under maintenance to the certain point of unit (welding connection, support, nozzle or other existing element, the dimensions and position of which are present on the unit drawing) shall be indicated. If auxiliary temporary reinforcement elements are used, they shall be indicated on the maintenance diagram or drawing.

Attachments:

- 1. Maintenance diagrams and drawings (if provided as separate deliverables).
- 2. Reconstruction design. (if reconstruction is carried out).
- 3. Welding Procedures Specifications (WPS) (developed for each case of welding, fusion or soldering of element under maintenance).
- 4. Quality control plan

COMPLETED BY: _____
(job position, name, surname, signature, date)

APPROVED BY:
Chief Specialist of Equipment Technical Supervision _____

(name, surname, signature, date)

Chief Welding Specialist _____

(name, surname, signature, date)

ATTACHMENT No. 4
QUALITY CONTROL PLAN
 Attachment to technology No. _____

Developed by: _____
 (name and address of company)

1. Information about unit under maintenance (reconstruction):

Unit location _____
 (Operations Division, number of unit and complex)

Unit name and technological No. _____
 (indicate whether piping, pressure vessel, heater, tank or lifting mechanism. Unit technological No.)

2. Description of maintenance (reconstruction) _____ (short description of maintenance or reconstruction)

3. Abbreviations used:

- VT – Visual Testing
- RT – Radiographic Testing
- MT – Magnetic Particle Testing
- RT – Ultrasonic Testing
- PT – Penetrant Testing
- PMI- Positive material identification
- UT(Th)- Ultrasonic thickness Testing
- LT – Leak Testing
- XX- Oil and chalk method
- HT - Hydraulic Testing
- PT - Pneumatic Testing

4. Quality control data:

Item No.	Object	Drawing, diagram No.	Welding Procedures Specifications (WPS) No.	Testing method	Testing scope	Evaluation criteria	Testing carried out by; institution supervising the testing	Justification document
1.	Name or No. of Unit element, No. of connections welded		WPS No. if welded connection is tested	Method of testing (VT, RT or other)		Normative evaluation document and evaluation criteria (level, class, for HT and PT – testing pressure and time)	Who is to carry out testing, supervising institution, contractor or third party. Name of institution if available.	Testing protocol or other document if required.

5. Attachments:

5.1. Testing diagrams and drawings (if provided as separate deliverables).

Maintenance diagram can stand for the testing diagram; all the spots under maintenance and welding connections shall be enumerated and indicated on the diagram. Dimensions of spots and elements under maintenance, distances from the spot under maintenance to the certain point of unit (welding connection, support, nozzle or other existing element, the dimensions and positions of which are present on the unit drawing) shall be indicated. If auxiliary temporary reinforcement elements are used, they shall be indicated on the maintenance diagram or drawing.

COMPLETED BY: _____
 job position, name, surname, signature, date

APPROVED BY:
 Engineer of Equipment Technical Supervision _____
 name, surname, signature, date

Chief Specialist of Equipment Technical Supervision _____
 name, surname, signature, date

ATTACHMENT No. 5

FITTINGS MAINTENANCE, TESTING REPORT

No. _____

Date _____

Item No.	Valve Description and DN/PN	Valve Technological No.	Location	Casing Material	Replaced Parts	Pressure test as per EN12266-1 (<i>Proba ciśnienia według EN 12266-1</i>)					
						P10 test pressure/time (Bar/s)	P10 result Yes/No	P11 test pressure/time (Bar/s)	P11 result Yes/No	P12 test pressure/time (Bar/s)	P12 containment level (A,B)

Responsible person _____
job position, name, surname, signature

PRIEDAS Nr.6/ ATTACHMENT NO.6

Reikalingų dokumentų paketas slėginių vamzdynų, slėginių indų, talpyklų, krosnių ir katilų remontui, gamybai ar montavimui (Documentation required for pressure piping, vessels, tanks, furnaces and boilers repair, fabrication and installation)

Eil. Nr.	Dokumento pavadinimas	Document title
1	Dokumentai, pateikiami užsakovui prieš darbų pradžią.	Documents to be submitted to Owner before commencement of works.
1.1	Liudijimo, išduoto LR įgaliotos įstaigos, kad įmonė gali remontuoti, montuoti, gaminti slėginius indus, slėginius vamzdynus, talpyklas, katilus kopija.	A copy of certificate issued by an authorized body of the Republic of Lithuania to perform vessels maintenance and installation works.
1.2	Valstybinės energetikos inspekcijos atestato eksploatuoti (remontuoti) naftos ir naftos produktų įrenginius kopija.	A copy of certification issued by the State Energy Inspectorate to operate (repair) crude oil and petroleum products units.
1.3	Remonto technologija, vykdomoji (remonto) schema, planuojamų naudoti medžiagų sąrašas.	Repair technology, execution (repair) scheme, a list of materials to be used.
1.4	Kokybės kontrolės planas.	Quality control plan
1.5	Projekto kopija arba techninio patikrinimo akto kopija.	A copy of draft or technical inspection report.
1.6	Suvirinimo procedūros, WPAR.	Welding procedures, WPAR.
1.7	Pažyma apie suvirintojų patikrinimą AB „Mažeikių nafta“.	Notice about welders testing in AB ORLEN Lietuva.
1.8	Pažyma apie termistų patikrinimą AB „Mažeikių nafta“.	Notice about thermal processing workers testing in AB ORLEN Lietuva.
2	Dokumentai, pateikiami užsakovui prieš vidaus ar išorės apžiūrą, hidraulinį bandymą ar kitą inspekciją.	Documents to be submitted to Owner before internal/external inspection, hydro test or other inspection.
2.1	Visi 1-ame punkte išvardinti dokumentai.	All documents specified in Item 1.
2.2	Vykdomoji (remonto) schema. <i>Vamzdynamics reikalinga aksonometrinė viso vamzdyno, krosnies, katilo kompiuteriu braižyta schema ir šios schemos kompiuterinė Visio ar Autocad versija.</i>	Execution (Repair) Scheme. Isometric drawing made by computer of the entire piping, furnaces, boilers and the drawing version in Visio or Autocad format.
2.3	Atliekant hidraulinius bandymus reikalinga HB schema su nurodytomis aklių ir manometrų pastatymo vietomis.	Performing hydro tests, HT drawing with indicated blinds and pressure gauges location.
2.4	Panaudotų medžiagų specifikacija. <i>Vamzdynamics, krosnims, katilams reikalinga medžiagų specifikacijos kompiuterinė versija.</i>	Specifications of materials used. Piping, furnaces, boilers specifications electronic version.
2.5	Suvirinimo darbų žurnalas.	Welding logbook.
2.6	Suvirintojų sąrašas.	A list of welders.
2.7	Suvirintojų pažymėjimų kopijos.	Copies of welders' certificates.
2.8	Terminį apdirbimą atlikusio personalo sąrašas.	A list of thermal processing personnel.
2.9	Terminio apdirbimo žurnalas ir diagramos.	Thermal processing logbook and diagrams.
2.10	Terminį apdirbimą atlikusio personalo pažymėjimų kopijos.	Copies of thermal processing personnel certificates.

Eil. Nr.	Dokumento pavadinimas	Document title
2.11	Elementų ir suvirinimo siūlių cheminės sudėties nustatymo, po sumontavimo, protokolas (legiruotiems plienams).	Elements and welds chemical composition assessment after installation report (for alloyed steel).
2.12	Neardomosios kontrolės išvados.	NDT conclusions.
2.13	Naujų atvamzdžių, vamzdžių, alkūnių ir t.t. faktinių sienelės storių matavimo rezultatai.	Results of new nozzles, tubes, elbows, etc. wall thickness measuring.
2.14	Flanšinių sujungimų uždarymo aktas. Darbuotojų, išklausių flanšinių sujungimų surinkimo kursų, sąrašas.	Report of flanged connections installation. A list of personnel who attended flanged connections installation courses.
2.15	Niveliacijos aktas (jei reikalaujama projekte). <i>Talpykloms reikalingi horizontalumo ir vertikalumo matavimų rezultatai (tuščios ir pilnos talpyklos).</i>	Levelling report (if required according to Design). Results of tanks verticality and horizontality measuring (empty and loaded tanks).
3	Pateikiami dokumentai užsakovui po darbų užbaigimo.	Documents to be submitted to Owner after works execution.
3.1	AB "Mažeikių naftos" nustatytos formos pasas arba remonto dokumentacija.	Passport of the form established by AB ORLEN Lietuva or repair documentation.
3.2	Remonto-montavimo kokybės pažymėjimas.	Repair-installation quality certificate..
3.3	Atitikties PED 97/23 direktyvai deklaracija.	Declaration of compliance with Directive PED 97/23.
3.4	Igaliotos įstaigos Techninių patikrinimų ataskaitos.	Technical inspection reports by the authorized institution.
3.5	Visi 2-ame punkte išvardinti dokumentai.	All documents specified in Item 2.
3.6	Galutinis projektas (su visais pakeitimais).	Final Design (including all changes).
3.7	Projekte nurodytų medžiagų pakeitimo-suderinimo su užsakovu ir/ar projektuotoju aktas (arba kitas dokumentas).	Statement of materials specified in Design replacement -coordination with Owner and/or Designer
3.8	Stipruminiai skaičiavimai.	Strength calculations.
3.9	Vamzdynų praplovimo-prapūtimo aktas.	Report of piping purging and cleaning.
3.10	Vidaus elementų (įrangos) priėmimo/išbandymo aktas.	report of internals acceptance/testing.
3.11	Įrenginiui iš austenitinio plieno hidraulinio bandymo atlikimui naudojamo vandens analizės pažyma (chloridų kiekis)	Water analysis certificate (chloride content) for hydraulic testing of unit made of austenitic steel.
3.12	Priešgaisrininės ir/ar aušinimo sistemos priėmimo aktai.	Fire water and/or cooling system acceptance statements.
3.13	Paslėptų darbų aktas.	Report of hidden works.
3.14	Izoliacijos, antikorozinės dangos (dažymo) priėmimo aktas.	Insulation, anticorrosive coating (painting) acceptance statement.
3.15	Panaudotų medžiagų sertifikatai su įvadinės kontrolės protokolų kopijomis. Suvirinimo medžiagų sertifikatai.	Certificates of materials used with copies of initial inspection protocols. Welding material certificates.
3.16	Armatūros revizijos aktas.	Valves inspection report.
3.17	Įžeminimo aktas.	Grounding report.
3.18	Galutinis flanšinių sujungimų uždarymo aktas.	Final report of flanged connections installation.
3.19	Sumontuotos krosnies kamuoliuko testo pažyma.	Installed heater ball test certificate.
3.20	Flanšinių sujungimų užveržimo momentų lentelė.	Flanged connections tightening torque values.
3.21	Naujai pagaminto slėginio indo eksploatacijos instrukcija.	Operation manual of newly fabricated vessel.