Policy in the Field of Safe Operation of Process Pipelines of Ilim Group JSC

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Document content

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1. Purpose

1.1. The policy in the field of process pipelines safe operation of Ilim Group JSC (hereinafter, the Company) determines the requirements of the company for the safe operation of process pipelines.

1.2. The purpose of this policy is to prevent accidents and/or incidents, cases of industrial injuries in the design, manufacture, installation, testing, operation, maintenance, and repair (hereinafter, MR), reconstruction and modernization of process pipelines in accordance with the requirements of regulatory and technical documentation of the Russian Federation and IP policy taking into account local conditions and best practices.

1.3. This policy has been developed taking into account the requirements of regulatory documents of the Russian Federation and international standards, as part of implementation of the Ilim's Global Manufacturing System GMS, including the International Paper Policy "Hazardous Media Pipelines. G-1115 PSM."

1.4. For the effective implementation of this Policy, best practices of maintenance, reliability, and safe operation of the Company's process pipelines, taking into account the requirements of international standards, regulatory documents shall be developed (revised) by the branches of the Company.

2. Scope of application

2.1. This Policy is mandatory for use by all employees of the Company, all other persons admitted to the production facilities of the Company, and shall be applied to works performed by personnel in existing workshops during design, installation (dismantling), adjustment, and operation, including repair, reconstruction, modernization, and disposal (liquidation) of process pipelines.

2.2. This Policy is recommended to be applied by the subsidiaries and affiliates of Ilim Group JSC. Application of this Policy in subsidiaries and affiliates is reached by a statement and enforcement of the relevant local regulations by the authorized governing bodies of subsidiaries and affiliates.

3. Definitions

PP – process pipeline (PP – pipelines intended for transportation of various substances (raw, intermediate, and final products) necessary for the process conducting);
PR – periodic review;
ISER – industrial safety expert review;
IS – industrial safety;
FRR – Federal Rules and Regulations in the field of industrial safety *Safety Rules for Chemically Hazardous Production Facilities*;
TR/CU 010/2011 – Technical Regulation of the Customs Union *On the Safety of Machinery and Equipment*;
FZ No. 116 – Federal Law *On Industrial Safety of Hazardous Production Facilities;*
the Company – Ilim Group JSC;
SSD – structural subdivision;
MR – maintenance and repair;

RTD – regulatory and technical documentation.

4. Basic requirements

4.1. Process pipelines include pipelines conveying raw materials, semi-finished and finished products, fuel, reagents, and other substances that ensure the conduct of processes and equipment operation, as well as inter-workshop pipelines that are on the balance sheet of the enterprise (hereinafter, the pipelines), except for steam and hot water pipelines working with a pressure of more than 0.07 MPa and a temperature of over 115°C, as well as gas distribution and gas consumption networks.

4.2. The hazard class of process media shall be determined by the developer of the design documentation based on the hazard classes of substances contained in the process medium and their ratios.

The category of the pipeline shall be established by the developer of the design documentation for each pipeline and shall be specified in the design documentation.

4.3. An example of the pipelines classification is given in the table below:

General group	Substances conveyed	Examples of substances
A	Substances with toxic effect: a) extremely and highly hazardous substances of Classes 1 and 2	Class 1: chlorine dioxide; Class 2: hydrochloric acid, sulfuric acid, caustic soda (sodium hydrate), chlorine, and hydrogen peroxide;
	b) moderately hazardous substances of Class 3.	Sulfur dioxide (sulfurous-acid anhydride), nitric acid, sodium chlorate, and sodium hypochlorite
B	Explosion and fire hazardous substances: a) flammable gases	Hydrogen
	b) highly inflammable liquids (HIL)	Gasoline, acetone, methanol, and turpentine
	c) flammable liquids (FL)	Fuel oil, tall oil, etc.
C	Low-combustible and noncombustible substances	Alkali liquor, pulp, alumina, etc.

4.4. By issuing orders, the branches of the Company appoint persons from among the managers and specialists responsible for:

- Industrial control when operating PP;
- Good condition and safe operation of PP;

4.5. The specialist responsible for ensuring industrial control shall be responsible for organizing and coordinating the safe operation of PP in the SSD subordinated to the branch in accordance with

the job description and the order on the implementation of industrial control.

4.6. The specialist responsible for the good condition and safe operation of PP shall ensure safe operation of process pipelines by complying with the requirements of the internal documentation of Ilim Group JSC.

4.7. All reports on the operation of process pipelines (industrial safety expert reviews (hereinafter, ISER), the results of periodic reviews (hereinafter, PR) carried out by a specialized / expert organization and on their own, shall be studied in details by persons responsible for the industrial control by ownership and persons responsible for the good condition and safe operation of process pipelines, for the purpose of taking measures to eliminate defects (if detected).

5. Requirements for structure, design and installation of PP:

5.1. The pipeline design must ensure safety during operation and provide for the possibility of its complete emptying, cleaning, flushing, purging, external and internal inspection, control and repair, removal of air therefrom in case of a hydraulic test and water thereafter.

5.2. The laying of process pipelines shall be carried out according to a project developed by an organization having personnel trained and certified for knowledge of the requirements of existing RTD, in accordance with the regulatory and technical documentation for industrial safety and shall ensure:

- the possibility of using hoisting and transport facilities provided for by the project and direct monitoring of the technical condition;
- division into process units and production blocks taking into account the installation and repair works using mechanical means;
- the possibility to perform all types of works on control, heat treatment of welds and tests;
- insulation and protection of pipelines against corrosion, atmospheric and static electricity;
- preventing the formation of ice and other plugs in the pipeline;
- smallest length of pipelines;
- exclusion of sagging and formation of stagnant zones;
- the possibility of homing action of thermal deformations of pipelines;
- the possibility of unimpeded movement of hoisting mechanisms, equipment and fire fighting equipment.

5.3. The developed design documentation shall be agreed upon with the owner of the pipelines and shall be approved in terms of IS at the branches.

5.4. The design documentation for newly installed process pipelines and pipelines with expired standard service life subject to registration in the “Information characterizing HF” shall pass an industrial safety expert review with the subsequent registration of the ISER report.

Installation of process pipelines shall be carried out by an organization having trained and certified personnel, in accordance with the requirements of existing RTD, a developed method statement (MS), project, and installation manual. Deviation from the project and MS shall not be allowed without coordination in the prescribed manner. During the installation of pipelines, incoming quality control of materials, parts of pipelines and fittings shall be carried out in terms of their compliance with permits (compliance certificates (declarations), specifications, etc.), as well as operational qual-

ity control of the works performed. The results of the incoming control shall be documented with the application of all documents confirming the quality of the products.

5.5. Upon completion of installation and welding, welded joints nondestructive testing in the scope and methods specified in the project, as well as after the installation and final fixing of all supports, suspensions, execution of documents confirming the quality of the work performed, shall be subjected to external inspection, strength and leak testing and, if necessary, additional sealability tests with determination of pressure drop.

5.6. Upon completion of tests, execution of permits (in case of their absence, conducting ISER with determination of the permitted service life), the permit to operate pipelines shall be given by the person performing industrial control, with a record made in the pipeline certificate.

5.7. Permission to personnel to put the pipeline into operation shall be given by the person responsible for good condition and safe operation, with a record made in the operational log.

5.8. The decommissioning and dismantling of pipelines shall be carried out on the basis of an instruction of the person responsible for the good condition and safe operation of the process pipelines, subject to the requirements and measures specified in the documentation for the liquidation (conservation) of process pipelines developed by a specialized organization and having passed ISER.

5.9. The number of separable joints in process pipelines shall be minimal.

6. Requirements for the operation of process pipelines

6.1. Persons responsible for the safe operation of pipelines are specified in Clauses 4.5 and 4.6 of this provision.

6.2. Maintenance of technological pipelines shall be carried out in accordance with the requirements of internal RTD and the “Recommendations on the Design and Safe Operation of Process Pipelines.”

6.3. During the operation of process pipelines, continuous monitoring of the working condition of pipelines shall be carried out by means of:

- external inspection;
- examinations (periodic reviews);
- industrial safety expert review;
- technical diagnoses.

6.4. The external inspection is aimed at identifying visible defects (leakage in the pipeline and fittings, corrosion, deterioration of the insulation, hanger-support system) and shall be carried out in accordance with the requirements of internal documentation of Ilim Group JSC and the *Recommendations on Installation and Safe Operation of Process Pipelines*. The frequency, methodology, and scope of works on inspection of pipelines shall be determined depending on the history of operation of the pipeline, the material of the pipeline, the environment, and operating conditions and shall be at least one time per year. An external inspection of pipelines shall be carried out during the examination of the structural subdivision in which the pipeline is operated. In case of remarks, they shall be reflected in the instruction issued based on the results of the examination.

6.5. The basic method for monitoring the working condition of process pipelines shall be periodic reviews conducted in accordance with the requirements of the internal documentation of Ilim Group JSC and the *Recommendations on Installation and Safe Operation of Process Pipelines*.

6.6. The terms of the review shall not exceed the terms specified in Appendix No. 22 of the *Recommendations on Installation and Safe Operation of Process Pipelines*.

6.7. The procedure for the review of pipelines shall be specified in the *Recommendations on Installation and Safe Operation of Process Pipelines* and in the internal documentation of Ilim Group JSC. The results of the review shall be recorded in the documents for the process pipelines with specification and signature of the persons who conducted it. The results of measurements of the wall thickness shall be attached to the documents.

6.8. Measurements of the thickness of the pipeline and its main elements shall be carried out in accordance with the requirements of the *Recommendations on the Design and Safe Operation of Process Pipelines*.

6.9. During the operation of process pipelines, their condition shall be monitored by maintenance personnel by conducting an external inspection at least one time per shift. The inspection results shall be recorded in the operational log. If major defects are identified, it is required to promptly notify the shift supervisor with subsequent notification of the responsible persons.

6.10. Localization and liquidation of emergency situations shall be carried out in accordance with the requirements of internal RTD (operating instructions, ECAP, etc.)

7. Requirements for maintenance and repair of process pipelines

7.1. Maintenance and repair and installation works on PP shall be carried out in accordance with the design and operational documentation, the requirements of RTD for industrial safety, internal RTD and Section XI of the Guidelines.

7.2. Only trained personnel shall be allowed to carry out repairs. Tests shall be carried out on special equipment (stands, devices).

7.3. Repair of pipelines shall be carried out on the basis of acts of review and rejection with the application of an extract of PP layouts.

Reconstruction of PP shall be allowed only after amending the design documentation (with the appropriate expert reviews and approvals).

7.4. The units, parts, and materials used in the repair and installation works shall be selected in accordance with the established requirements. Volumes and methods of their control shall be determined in accordance with the established requirements.

7.5 Elements of pipelines may be used only after the incoming control.

7.6 Requirements for the quality of purchased plugs, for their installation and removal shall be established in the local regulatory documentation of the branches of the Company.

7.7. The documentation for the installation and/or repair of the pipeline shall be stored complete with the certificate or in the pipeline operating log.

8. Training / qualification and admission of personnel to PP operation

8.1. Persons operating PP responsible for the operating condition and safe operation of PP, as well as those responsible for the industrial control must be trained and certified in accordance with the requirements of Article 9, Cl. 2, No. 116-FZ.

8.2. After passing pre-certification training and subsequent certification, the employees of the

branch shall be allowed to operate the PP by order of the SSD on admission to the independent performance of works.

9. Responsibility

8.1 Supervision of the implementation of the requirements of this Policy shall be entrusted with the Senior Vice President for Operations.
8.2. The branch managers shall be liable for complying with the requirements of this Policy.

10. Revision procedure

10.1. This Policy is approved by the Chief Executive Officer of Ilim Group JSC.
10.2. The changes and additions to this Policy are made on the basis of the order of the General Director of Ilim Group JSC.
10.3. If, due to changes in the legislation of the Russian Federation, certain articles of this Policy contradict them, these articles will become invalid and until the Policy is amended, it is required to be guided by the legislation of the Russian Federation.