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**REGULATORY COOPERATION PROJECTS:
PROPOSAL FOR A SECTORAL “INITIATIVE” ON PIPELINE SAFETY**

Paper submitted by the Russian Union of Oil and Gas Constructors

This paper contains a proposal for a new sectoral initiative in the areas of pipelines. It is being submitted by the Russian Union of Oil and Gas Constructors. The project should be based on the UNECE Recommendation “L” (“International Model for Technical Harmonization”), similar to the Working Party’s current sectoral initiatives in the telecom and earth-moving machinery sectors. See http://www.unece.org/trade/ctied/WP.6/major_doc.htm

The project would complement the activities that UNECE is already carrying out on good practices and safety of pipelines within the framework of the UNECE Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents and the Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. The Working Party will be informed about these activities during the session. See <http://www.unece.org/env/teia/water/pipeline/pipeline%20safety.htm>.

The paper is presented to delegations for consideration and decision. Apart from some minor editorial changes, it is reproduced in the form and language in which it was received.

I. Introduction

1. The Russian Union of Oil and Gas Constructors (ROSSNGS), comprising 97 companies and organizations working in the field of pipeline systems project design, construction and operation, is submitting to the UNECE Working Party on Regulatory Cooperation and Standardization Policies a proposal to prepare a draft technical regulation on pipelines for the Russian Federation and Commonwealth of Independent States countries (possibly as a regional technical regulation).

2. The regulation is to be applied in project design, construction, testing, use of materials, operation, maintenance, conservation and utilization of pipelines for oil and gas industry products. Preparation of the regulation should constitute part of the Working Party's programme of work for 2006.

3. ROSSNGS members are interested in developing such a regulation because the majority of pipelines being constructed or designed today in Russia pass through several countries. In many cases the customers of pipelines are foreign companies and Russia's current norms and standards are obsolete and in need of considerable revision.

4. Discrepancies between Russia's technical regulations and those of other countries hinder project implementation and entail numerous technical adjustments, thus prolonging the implementation time and making the projects more costly.

II. Current status of the problem

5. During recent years, Russian companies and organizations have been increasingly participating in large-scale international pipeline projects such as Yamal – Western Europe, Caspian Pipeline System, Gas Pipeline Russia – Turkey, and the Sakhalin project.

6. The high technological complexity of these projects, their international character, the high capital-output ratio and high level of risk dictate stringent requirements for project normative documentation, quality management and environmental and labour protection.

7. The country's current pipeline norms and standards were developed around the 1980s and have not been modified since. They have become obsolete in organizational, technological and legal aspects. Many norms do not match the level of development of national economies, are sometimes of a contradictory character and are not harmonized with international standards.

8. Economic reforms in Russia have stimulated the further development of the fuel and energy industry, as well as bringing about an inflow of investment into the oil and gas extraction sectors and pipeline transportation systems. In the near future the following projects are to be implemented: the North-European gas pipeline (from the Shtokman gas field towards Europe, via the Baltic seabed), Yamal Peninsula fields (developing oil and gas pipelines eastwards towards China).

9. The reorganization of the administrative technical regulation sphere in accordance with a Directive of the President of the Russian Federation, as well as with the Federal Law "On Technical Regulation" dated 6 November 2004, provides the legal basis for the development of a legal and normative basis in the area of pipeline safety.

10. Developments in Europe and elsewhere in the world can provide good examples for pipeline technical regulation development in Russia. Trade globalization processes, as well as EU economic integration, require uniform standards and rules of play. In the European Union, these are implemented in the form of EU Directives, which are ratified by Member States.

11. The same situation has emerged in Russia and the CIS countries, where it has become essential to develop new legislation on mandatory requirements for regulating the safety of transport pipelines, distributing and field pipelines.

12. Developing a Russian technical regulation on “Safety of Transportation Pipelines, Pipelines (local) for Well Sites and Distribution” (proposed title), taking into account the provisions of UNECE’s “International Model”, will allow Russia to actively participate in UNECE activities related to international technical harmonization and thus modify national industrial pipeline-safety norms (in full conformity with Russian general legislation for technical regulations).

13. In the framework of national legislation this regulation should represent a specific technical regulation covering the processes related to project design, use of materials, construction, supervision, testing, operation, maintenance and utilization of pipeline systems used for oil and gas transportation. It should be applied for ground and marine pipelines as well as for field and distribution pipelines.

14. Harmonizing national and foreign norms implies more than simply tightening certain normative requirements as was done for the first investment pipeline projects. It means creating new norms, with all the requirements based on tested scientific and technological provisions aimed at minimizing risks and ensuring safety in the pipeline facilities.

15. Introducing such a technical regulation in the form of a law will enable Russia to participate on an equal footing with other countries in discussions on worldwide harmonization of mandatory pipeline system standards in the framework of multilateral negotiations with the World Trade Organization.

16. Since the Working Party already has experience in developing a technical regulation model, i.e. the “Telecom Industry” and “Earth-Moving Machinery” initiatives, ROSSNGS is proposing that the Working Party develop a new project on regional technical regulation. The project could be given the title “Safety of Oil and Gas Transportation Pipelines”.

17. As the proposed regulation should represent a mutually coordinated document, Common Regulatory Objectives (CROs), as foreseen in the “International Model”, have to be drawn up and coordinated within the framework of such a document (below we have set out some proposals to be included in the future CRO, in accordance with annex B of the “International Model”; document ECE/STAND/17/Rev.4).

III. Scope of the technical regulation

18. This section should establish the scope or field of application of the regulation. The regulation will be applied in the project design, construction, testing, use of materials, operation, maintenance, conservation and utilization of pipelines for oil and gas industry products. The requirements and provisions should be applied for marine and ground pipeline systems connecting well sites, pipeline facilities, oil refineries and storage facilities, including any pipeline sections within such facilities intended for connecting the facilities to trunk pipelines.

IV. Requirements for pipelines

19. The regulation should establish safety requirements for pipeline facilities, ensuring the protection of human life and health, and the environment, as well as the protection of public and private property. The regulation should also establish requirements for the following:

- Safety during construction, including: emission safety, biological, explosive, mechanical, industrial, thermal, chemical, electrical and radiation safety
- Safety of production facilities during operation, transportation, storage and production, as well as waste utilization
- Electromagnetic compatibility of devices and equipment during operation
- Measurements
- Types, rules and schemes of conformity certification
- Development of a common legal basis for CIS countries and leading countries in western Europe in the area of pipeline system project design, construction and operation.

V. Reference to standards

20. In the framework of international pipeline technical regulation development, project cooperation could be based on the following:

- Within CIS - appropriate regulating agreement between CIS States
- On a European and global level – appropriate practice of international projects in the sphere, based on application of international standards such as EU standards, American Petroleum Institute (API) standards, as well as standards used in Canada, the United Kingdom and other countries
- “Telecom Industry” and “Market Surveillance” projects
- Pipeline construction normative documents of Russian Federation.

21. For the development of the regulation, standards listed in the annex to this paper will be applied when the requirements of such standards comply with the provisions of the proposed regulation.

VI. Conformity Assessment

22. This section should indicate that all works related to project design, testing, operation, maintenance and conservation of pipeline systems must be conducted by competent and suitably qualified personnel.

23. The regulation should also take the following into account:

- Assessment of conformity of pipeline transportation facilities with safety requirements
- Requirements for rules and types of conformity assessment of pipeline production facilities
- Rules and types of conformity certification for pipeline production facilities
- Schemes of conformity certification of pipeline production facilities during project design phase
- Schemes of conformity certification of pipeline production facilities during construction, overhaul, expansion, reconstruction and re-equipment
- Schemes of conformity certification of pipeline production facilities during storage (conservation) and utilization.

24. Also a quality management system should be applied in such a way that the requirements of the proposed regulation be respected.

VII. Market surveillance

25. This section of the regulation should consider designation of responsibility for market surveillance in the territory in which the regulation is in force, as well as the right to withdraw products from national markets if found to be in non-conformity with the requirements of the regulation.

26. As Russian companies are participating in international projects, there is an urgent need for coordination in technical regulation and standardization in the project design, construction and operation of international pipeline systems in order to:

- Facilitate the application of appropriate basic international standards in Russia taking into account national specificities
- Ensure uniformity of the terms and definitions
- Provide for compatibility of national technical regulations and standards with other appropriate international standards to be adopted or being prepared
- Prevent further growth of discrepancies between national standards and technical regulations as a result of previous policy of “technological barriers” with international or regional norms in the spheres of common interest.

27. It is proposed that a new group of experts be created for the efficient implementation of the project. The group might be given a title such as “ad hoc of Team of Specialists on STandardization And Regulatory Techniques for Pipelines (“START-SP”). The project could have a similar structure to that of the Working Party’s telecom industry, earth-moving machinery and market surveillance projects.

28. Should the Working Party respond positively to this proposal, ROSSNGS and its member organizations are prepared to take responsibility for coordination issues and as well as organizational tasks to initiate the project.

29. For further information, please contact:

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ANNEX

List of ISO and other relevant standards to be used in the proposed project (list of relevant Russian standards is under translation)

ISO 13623	Petroleum and natural gas industries – Pipeline transportation systems.
ISO 3183-1:1996	Petroleum and natural gas industries – Steel pipe for pipelines – Technical delivery conditions – Part 1: Pipes of requirement class A.
ISO 3183-2:1996	Petroleum and natural gas industries – Steel pipe for pipelines – Technical delivery conditions – Part 2: Pipes of requirement class ?.
ISO 3183-3:1999	Petroleum and natural gas industries – Steel pipe for pipelines – Technical delivery conditions – Part 3: Pipes of requirement class ?.
ISO 13847	Petroleum and natural gas industries – Pipeline transportation systems – Welding of pipelines.
ISO 14313	Petroleum and natural gas industries – Pipeline transportation systems – Pipeline valves.
ISO 14723	Petroleum and natural gas industries – Pipeline transportation systems – Subsea pipeline valves.
ISO 148:1983	Steel -- Charpy impact test (V-notch)
ISO 7005-1:1992	Metallic flanges -- Part 1: Steel flanges
API 650	Welded Steel Tanks for Oil Storage.
API 5L	Specification for Line Pipe
API 620	Design and Construction of Large, Welded, Low-Pressure Storage Tanks, Ninth Edition
ANSI/API 12D	Specification for Field Welded Tanks for Storage of Production Liquids
API Spec 6D Amended Annex F	Specification for Pipeline Valves
ANSI/API 651	Cathodic Protection of Aboveground Petroleum Storage Tanks
API 1102	Steel Pipelines Crossing Railroads and Highways
ANSI/API 1104	Welding of Pipelines and Related Facilities - 19 th Edition
ANSI/API RP 1110	Pressure Testing of Liquid Petroleum Pipelines
API 2000	Venting Atmospheric and Low-Pressure Storage Tanks
ASME B31.4-2002	Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
ASME B16.5-2003	Pipe Flanges & Flanged Fittings
ASME B31.3-2004	Process Piping
ASTM A194/A194M-04a	Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
MSS SP-25-1998	Standard Marking System for Valves, Fittings, Flanges and Unions
MSS SP-44-1996 (R2001)	Steel Pipeline Flanges
NFPA (Fire) 30-03	Flammable and Combustible Liquids Code
ANSI/NACE MR0175-2001	Standard Material Requirements - Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment
NACE RP0169-2002	Standard Recommended Practice Control of External Corrosion on Underground or Submerged Metallic Piping Systems