National standardisation system of Ukraine and standardisation system of PJSC Ukrtransgaz. Practical aspects of implementation of the INOGATE project on harmonisation of standards in Ukraine

Report by ***Deputy Chief of Science and Technology Administration, Head of the Department of Standardisation and Quality Management System of PJSC "Ukrtransgaz"***

A. Kliun

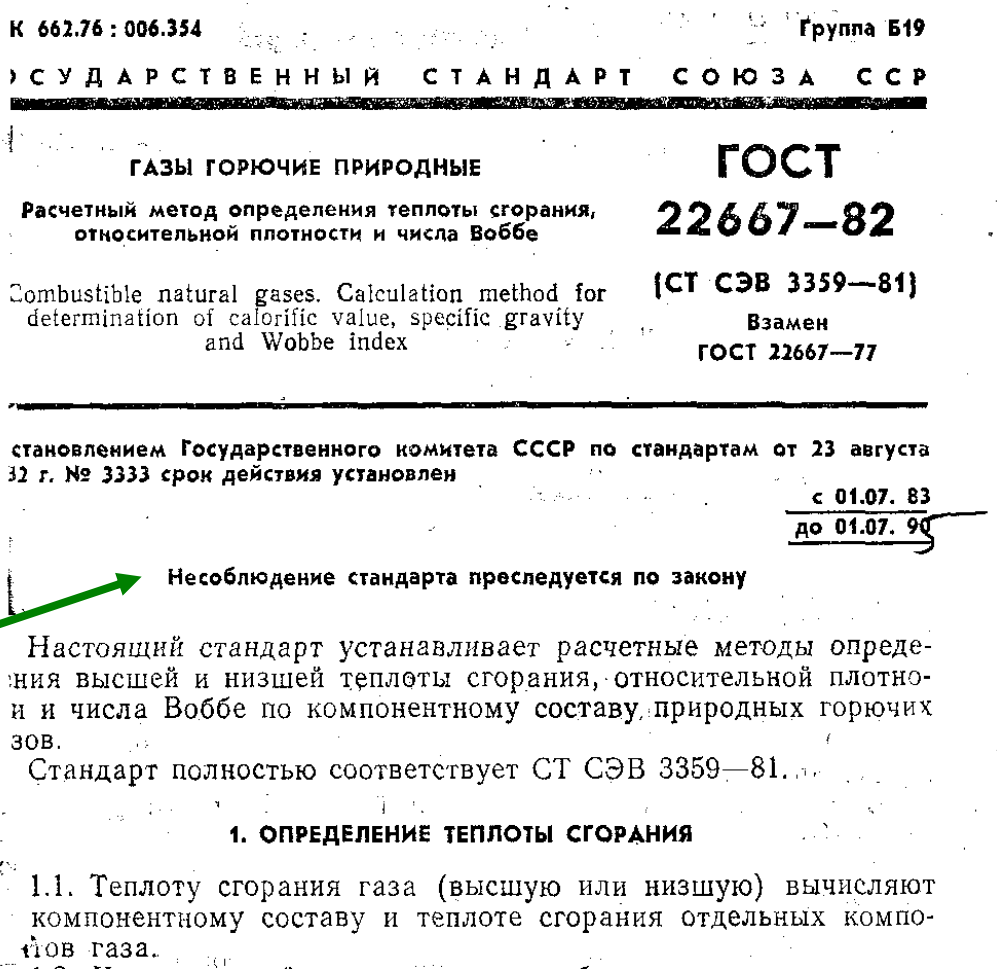
Background

Ukraine inherited from the former Soviet Union **a system well-developed of standardisation and regulation**, compliant with the requirements of the administrative centrally planned economy, where there were no independent economic entities - each enterprise was subordinated to some ministry or agency at the all-Union or republic level.

Characteristic principles of this system:

- total regulation of all aspects of life, therefore **the requirements of the standards and codes were mandatory**, and the regulations were part of the Soviet legal system.
- For example, standards for products stated **«Non-observance of the standard is subject to legal prosecution»**;
- standardisation spanned **four levels (all-Union, sectoral, republic, enterprise / institution).**

Example of the page from the standard developed during the Soviet period



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ГОСУДАРСТВЕННЫЙ СТАНДАРТ СОЮЗА ССР

ГАЗЫ ГОРЮЧИЕ ПРИРОДНЫЕ

Расчетный метод определения теплоты сгорания, относительной плотности и числа Воббе

Combustible natural gases. Calculation method for determination of calorific value, specific gravity and Wobbe index

ГОСТ 22667—82

(СТ СЭВ 3359—81)

Взамен ГОСТ 22667—77

становлением Государственного комитета СССР по стандартам от 23 августа 32 г. № 3333 срок действия установлен

с 01.07. 83
до 01.07. 90

Несоблюдение стандарта преследуется по закону

Mandatory application

Настоящий стандарт устанавливает расчетные методы опреде- ния высшей и низшей теплоты сгорания, относительной плотно- и и числа Воббе по компонентному составу природных горючих зов.

Стандарт полностью соответствует СТ СЭВ 3359—81.

1. ОПРЕДЕЛЕНИЕ ТЕПЛОТЫ СГОРАНИЯ

1.1. Теплоту сгорания газа (высшую или низшую) вычисляют компонентному составу и теплоте сгорания отдельных компо- тов газа.

Stages of reforming the Soviet system of standardisation and regulation

- **1993** – **creation of a national system of standardisation** by decree of the Cabinet of Ministers of Ukraine "On Standardisation and Certification" and "On state supervision of compliance with standards, rules and regulations and responsibility for their violation" , underlying DSTU (state standards)
- **2001** – **approximation of the national system of technical regulation and standardisation to the international counterpart** through adoption of the Law "On standardisation" and "On Conformity Assessment", "On accreditation of conformity assessment bodies"
- **2006** – **bringing national legislation into line with international and European practice** through adoption of the Law of Ukraine "On standards, technical regulations and conformity assessment procedures", as well as amendments to the previously adopted laws
- **2010-2011** – reform of the central executive authorities of Ukraine in charge of technical regulation and standardisation, pursuant to the Law of Ukraine "On Central Executive Bodies" and the Presidential Decree "On Optimisation of the System of Central Executive Bodies"
- **2014-2015** – reform of the national standardisation body, introduction of a number of laws and regulations intended to align national standardisation system of Ukraine with international and European counterparts, as well as a priority area - the policy of introducing international and European standards

Levels of standardisation and standardisation bodies

Levels of standardisation	Standardisation bodies
International	**International Standardisation Organisations**
Regional	**Regional (European) Standardisation Organisations**
National	**National Standardisation Institution (NSI) and TC for standardisation**
Institutional/ Enterprise	**Structural subdivisions of organisations carrying out functions of standardisation service**

Factors contributing to the increase in the activities of the TC for standardisation

- **Launch of a new project "INOGATE Technical Secretariat and Integrated Program to Support the Energy Objectives of the Baku Initiative and the Eastern Partnership" within B2 component "Harmonisation of standards in the electricity and gas sector.**

- **Establishing Cooperation between PJSC Ukrtransgaz with the German concern E.ON Ruhrgas (Germany). Issues of standardisation and procedures for the implementation of standards were a key component of cooperation.**

Practical aspects of cooperation within the INOGATE project

- **Training and capacity building of the staff at Ukrtransgaz and other companies in the field of standardisation and practical matters of both introduction and implementation of standards.**

- **Obtaining a list of international and European standards, particularly relevant to the gas transportation sector, as well as information on the standards of the German and Austrian Gas Associations.**

- **Obtaining the translations of relevant international and European standards.**

- **Work within technical committees, cooperation with national standards bodies.**

Standards adopted in Ukraine in cooperation with the INOGATE project

Adopted by the order of the Ministry of Economic Development of Ukraine of 28.07.2014 № 886:

- ***DSTU GOST EN 1918-1:2014 Gas infrastructure - Underground gas storage - Part 1: Functional requirements for storage in aquifers (GOST EN 1918-1-2012, IDT; EN 1918-1:1998, IDT)***
- ***DSTU GOST EN 1918-2:2014 Gas infrastructure - Underground gas storage - Part 2: Functional requirements for storage in oil and gas fields (GOST EN 1918-2-2012, IDT; EN 1918-2:1998, IDT)***
- ***DSTU GOST EN 1918-3:2014 Gas infrastructure. Underground gas storage. Part 3: Functional requirements for storage in solution-mined salt caverns (GOST EN 1918-3-2012, IDT; EN 1918-3:1998, IDT)***
- ***DSTU GOST EN 1918-5:2014 Gas infrastructure. Underground gas storage. Part 5: Functional requirements for surface facilities (GOST EN 1918-5-2012, IDT; EN 1918-5:1998, IDT)***
- ***DSTU GOST EN 437:2014 Test gases - Test pressures - Appliance categories (GOST EN 437-2012, IDT; EN 437:2003, IDT)***

Standards are effective from 01.11.2014

Standards adopted in Ukraine in cooperation with the INOGATE project

Adopted by the order of the Ministry of Economic Development of Ukraine of 28.07.2014 № 886:

- ***DSTU EN 1776 «Gas supply systems - Natural gas measuring stations – Functional requirements (EN 1776:1998, IDT)»***
- ***DSTU EN 12186 «Gas supply systems. GAS PRESSURE REGULATING STATIONS FOR TRANSMISSION AND DISTRIBUTION. Functional requirements (EN 12186:2000, IDT; EN 12186:2000/A1:2005, IDT)»***
- ***DSTU EN 14161 «Oil and gas industry. MAIN PIPELINE SYSTEM (EN 14161:2011, IDT)»***
- ***DSTU ISO 17089-1 «Measurement of fluid flow in closed conduits. ULTRASONIC METERS FOR GAS. Part 1: Meters for custody transfer and allocation measurement (ISO 17089-1:2010, IDT)»***

Standards are effective from 01.07.2015

Participation of experts of PJSC Ukrtransgaz in Technical Committees for Standardisation

In accordance with the Law of Ukraine "On Standardisation":
...functions of development, consideration and harmonisation of international (regional) and national standards are assigned to Technical Committee (TC)…

Experts of PJSC Ukrtransgaz are members of these TCs:

- ***TC 133 "Natural gas"***
- ***TC 146 "Materials, equipment, technologies and facilities for the oil and gas industry"***
- ***TC 19 "Scientific and technical terminology"***

Methods of adopting international and European standards as national in Ukraine

IS adopted as national ND	Method of adoption / reprinting	Degree of conformity	Advantages	Deficiencies
In the original language	Acknowledgement (EDS)	IDT	1. The simplest method requiring minimal effort. 2. Introduces an international standard into the Ukrainian regulatory field as a national one, which allows foreign investors, trading partners of Ukraine and the Ukrainian experts who know a foreign language, to use it	Limited applicability by the majority of Ukrainian experts, who do not speak English

Methods of adopting international and European standards as national in Ukraine

IS adopted as national ND	Method of adoption / reprinting	Degree of conformity	Advantages	Deficiencies
In the original language with a reference Ukrainian translation	Reprinting (RPR)	IDT	Wider applicability than in the previous case. Foreign investors, trading partners of Ukraine work with the English text, while Ukrainian experts - with a reference translation Reference translation into the Russian language is also possible, as it is understood by the majority of Ukrainian experts	1. Only the text in the original has a normative force. Therefore, conflicts may arise in the event of disagreement between the original and the Ukrainian translation. 2. More effort than in the previous case

Methods of adopting international and European standards as national in Ukraine

IS adopted as national ND	Method of adoption / reprinting	Degree of conformity	Advantages	Deficiencies
Ukrainian language	translation (TRL)	IDT or MOD	1. The text in the Ukrainian language is legally binding, ensuring wide applicability. 2. The degree of MOD compliance allows to adapt the IS to the Ukrainian environment, if there aren't many relevant technical deviations, so they can be clearly noted and explained	1. Translation errors cause more damage than in the previous case. Very high requirements for the quality of translation 2. More effort than in the previous case

Methods of adopting international and European standards as national in Ukraine

IS adopted as national ND	Method of adoption / reprinting	Degree of conformity	Advantages	Deficiencies
Ukrainian language	Re-working (PDF)	NEQ	It allows to adapt to the international standard to the Ukrainian environment, if there is a need to reproduce the provisions of the international standard in the national normative documents only partially. There are a lot of technical deviations, and therefore it is difficult to clearly note and explain them	The international standard is not applicable as a national, which in turn could complicate Ukraine's international economic cooperation

Connection between degree of compliance, the method of adoption and permitted changes in the national standards of Ukraine

Degree of compliance	Method of adoption/ reprinting	Permitted changes		
		Editorial changes	Structural changes	Technical deviations
Identical (IDT)	Acknowledgment (EDS)	no	no	no
	reprinting (RPR)	yes	no	no
	translation (TRL)	yes	no	no
Modified (MOD)	translation (TRL)	yes	yes	yes
Non-equivalent (NEQ)	Re-working (PDF)	yes	yes	yes

For a successful adoption of international and European standards in Ukraine the following is essential:

- ***Availability of modern and updated versions of the standards in English.***

- ***Availability of quality translation of the standards into Ukrainian, or at least Russian.***

Conclusions

- Adoption and introduction of national standards harmonised with international and regional **promotes a uniform technical policy of approximation of national standardisation system to the international and EU standardisation system.**
- Participation of experts of PJSC "Ukrtransgaz" in international projects for scientific and technical cooperation in the field of standardisation expands opportunities for exchange of experience and use of achievements of other countries, **allowing the gas transport system to work on par with world standards**.
- Introduction of international and European standards of the gas transportation sector **facilitates the implementation of legislative requirements of Ukraine aimed at integrating of Ukraine into the European community.**

Thank you for your attention!