

NIOEC-SP-70-18(1)							
DOCUMENT CODE							NO. OF PAGES: 11
PLAN/PRJ/SUB	UNIT	PHASE	DISCIPLINE	DOCUMENT TYPE	SERIAL NO.	REV. NO.	DATE
NIOEC	000	EG	IN	SP	7018	A1	FEBRUARY, 2007



NATIONAL IRANIAN OIL REFINING & DISTRIBUTION COMPANY
NATIONAL IRANIAN OIL ENGINEERING
& CONSTRUCTION COMPANY

NIOEC SP

NIOEC SPECIFICATION FOR PIPELINE INSTRUMENTATION

FIRST EDITION

JULY, 2005

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IN THE NAME OF GOD**FOREWORD**

By their very nature, technical standard specifications are continuously subject to modifications and revisions. To strengthen their merit and usefulness, continuous improvements, addendum, deletion of disparate information and consequently provision of updated revisions are to be made in order to ascertain that such standard specifications meet the current requirements, inclusive of Iranian Petroleum Standards (IPS) and the recognized and acceptable national and international standards, as well as the optimal codes and practices based on the accumulated in-house know-how and plant knowledge and experiences.

However, in reality, due to several reasons, not to mention the complexity of the matter, the ultimate goal of continuous direct embedment of the required changes on the relevant standard specifications may be far reaching. Therefore, in the interim periods between the officially issued revisions, the required changes will appear in other documents related to the engineering and design work of the on going projects.

In response to the initiative of the Design Division of the Engineering and Construction Directorate, and considering that the task of the execution of several important and mega projects for the realization of the new oil refineries, pipelines and oil terminals as well as improvements of the existing facilities, has been assigned to NIOEC, it was decided to update the NIOEC Specifications and to issue new official revisions.

The Design Division of the Engineering and Construction Directorate was itself entrusted to carry out this important task, and as such by forming several special technical committees, working in close co-operation and cohesion and sharing their expertise and knowledge, the updated and revised NIOEC Specifications were successfully prepared and complied.

These Specifications are intended to be used for Oil Refineries, Distribution Depots, Oil Terminals, Pipelines and Pump Stations within NIOEC's projects, and have been proven to be of high value for such purposes. It must however be appreciated that these Specifications represent the minimum requirements and should in no way be interpreted as a restriction on the use of better procedures, engineering and design practices or materials.

We encourage and highly appreciate the users and other clear sighted and experts to send their comments on the Specifications to the Design Deputy of the Engineering and Construction Director of NIOEC for evaluation and consideration.

S. R. KASAEIZADEH



EXECUTIVE DIRECTOR

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NOTES:

- 1) THIS SHEET IS A RECORD OF ALL REVISIONS TO THIS SPECIFICATION.
- 2) REMARKS RELATED TO EACH REVISION SHOW A BRIEF DESCRIPTION. THESE REMARKS SHALL BE INTERPRETED IN CONJUNCTION WITH THE REVISED TEXT MARKED BY REVISION NUMBERS.
- 3) WHEN APPROVED EACH REVISION SHALL BE CONSIDERED AS A PART OF THE ORIGINAL DOCUMENT.
- 4) NUMBER OF PAGES EXCLUDES THIS SHEET AND THE COVER SHEET.

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1. SCOPE

1.1 This specification defines NIOEC's general requirements for the design of the instrumentation specifically used in pipeline applications.

Deviations from this specification will only be permitted on obtaining written approval from NIOEC.

2. REFERENCES

Throughout this specification the following dated and undated standards and codes are referred to. These referenced documents shall, to the extent specified herein, form a part of this specification.

For undated references, the latest edition of the referenced document (including any supplements and amendments) applies. For dated references, the edition cited applies.

The applicability of changes in the dated references that occur after the cited date shall be mutually agreed upon by NIOEC and the vendor /contractor.

API	(AMERICAN PETROLEUM INSTITUTE)	
NIOEC-SP	(NIOEC SPECIFICATIONS)	
	NIOEC-SP-00-10	"Specification For Units"
	NIOEC-SP-00-75	"Specification for Pressure Relieving Systems"
	NIOEC-SP-70-07	"Instrumentation & Control System Calibration, Inspection And Tests"
	NIOEC-SP-70-16	"General Instrumentation Factory Inspection And Testing Of Instruments And Instrument Systems"
	NIOEC-SP-50-54	"Specification for Pig Launching & Receiving Trap"
	NIOEC-SP-90-52	"Specification for Packing and Packages "
ASME	(AMERICAN SOCIETY OF MECHANICAL ENGINEERS)	
IEC	(INTERNATIONAL ELECTRO-TECHNICAL COMMISSION)	
	60529	"Classification Of Degree Of Protection Provided By Enclosures"
NEC	(NATIONAL ELECTRICAL CODE)	
NEMA	(NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION)	
NFAPA	(NATIONAL FIRE PROTECTION ASSOCIATION)	
TÜV	(TECHNISCHER UBERWACHUNGS VERIEN)	
NACE	(NATIONAL ASSOCIATION OF CORROSION ENGINEERS)	
	01-03	

3. UNITS

International System of Units (SI) shall be used in accordance with [NIOEC-SP-00-10](#), unless otherwise specified.