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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/Z 41286-2022

Non-destructive testing instruments - X-ray pipeline crawlers

无损检测仪器 X射线管道爬行器

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part

1.Structure and Drafting Rules of Standardization Documents" drafted. Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents. This document is proposed by China Machinery Industry Federation. This document is under the jurisdiction of the National Standardization Technical Committee of Testing Machines (SAC/TC122). This document is drafted by: Liaoning Instrument Research Institute Co., Ltd., China Testing and Certification Group Co., Ltd., Jining Luke Testing Equipment Co., Ltd., Zhongshan Vocational and Technical College. The main drafters of this document. Yu Zhijun, Huang Qing, Ma Jun, Fuyang, Xu Bo, Wang Lin. Nondestructive testing instrument X-ray pipeline crawler

1 Scope

GB/Z 41286-2022 is the Chinese national standard on non-destructive testing instruments - x-ray pipeline crawlers, in the field of testing. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 9 March 2022 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 19.100, CCS N78. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of X-ray pipeline crawler. This document applies to X-ray pipeline crawler (hereinafter referred to as "crawler") with a tube voltage not

exceeding 300kV.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 Graphical signs of packaging, storage and transportation

GB/T 13384 General technical conditions for packaging of mechanical and electrical products

GB 18871-2002 Basic standard for ionizing radiation protection and radiation source safety

GB 22448-2008 Protection rules for industrial X-ray flaw detectors below 500kV

GB/T 25480 Basic environmental conditions and test methods for transportation and storage of instruments and meters

GB/T 26592-2011 Non-destructive testing instrument industrial X-ray flaw detector performance test method

GB/T 26838-2011 Non-destructive testing instrument portable industrial X-ray flaw detector

GB/T 36416.2 Testing Machine Vocabulary Part

3 Terms and Definitions

The terms and definitions defined in GB/T 36416.2 and the following apply to this document.

3.1 X-ray pipeline crawlers X-raypipelinecrawlers X-ray non-destructive testing special equipment for testing the quality of welds between pipelines transporting oil, natural gas or other flowable substances.

Note. The crawler consists of driving car, X-ray machine (X-ray tube, controller, etc.), battery pack, positioning system and other parts.

4 Technical requirements

4.1 Conditions of use According to the specified work procedures, the crawler should work normally under the following conditions.

a) Altitude. <=1000m (when the altitude exceeds 1000m, it shall be determined through negotiation between the supplier and the demander);

b) Ambient temperature. -10°C~60°C;

c) Relative humidity of air. <=85%.

4.2 Technical parameters

4.2.1 Basic parameters of crawler The basic parameters of the crawler are as follows: