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**NATIONAL STANDARD OF THE
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GB/T 29910.6-2013

**Industrial communication networks -- Fieldbus specifications --
Type 20 HART specification -- Part 6: Additional application
layer service definition and protocol specification**

工业通信网络 现场总线规范 类型20：HART规范 第6部分：应用层附加服务定义
和协议规范

(English Translation)

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Foreword

GB/T 29910 "Industrial communication networks - Fieldbus specifications - Type 20. HART specification" is divided into the following six sections.

--- Part 1. HART wired network physical layer service definition and protocol specification;

Part --- Article 2. HART wired network data link layer service definition and protocol specification;

--- Part 3. Application layer service definition;

--- Part 4. Application layer protocol specification;

Part --- Article 5. WirelessHART wireless communication network and communication profile;

--- Part 6. Application layer protocol specification definitions and additional services.

This section GB/T Part of 629,910.

This section drafted in accordance with GB/T 1.1-2009 given rules.

The partial modification of the use of HART Communication Foundation (HCF) technical documentation HCF_SPEC-710 "Industrial communication networks through wired Letter Network HART. HARTFSK, DLL and APL supplementary "Application layer service definition and protocol specification, the technical content of the original English text there is no difference in the structure of the text layout appropriately adjusted.

This part is proposed by China Machinery Industry Federation.

This part of the measurement and control of Standardization Technical Committee (SAC/TC124) is administered by the National industrial processes.

This section is drafted. Machinery Industrial Instrumentation Technology and Economy Institute, HART Communication Foundation, Chinese Academy of Sciences since Automation Research Institute, Shanghai Automation Instrumentation Co., Southwest University, Shanghai Institute of Industrial Automation Instrumentation, Systems Engineering Beijing and Belgium Cheng Co., Ltd., Beijing Science and Technology Co., Austin, Fujian on the Run Precision Instrument Co., Ltd., China Instrument Industry Association, Shanghai Han was heavenly networking Technology Co., Ltd., Chongqing Institute of Industrial Automation Instrumentation, double Group (Deyang) Heavy Equipment Co., Ltd.

1 Scope

IEC GB/T 29910 This part complements and extends GB/T 29910.3, GB/T 29910.4 and GB/T 29910.5 defined Application layer service definition and protocol specification Fieldbus type 20 (HART and WirelessHART) communication networks. This section provides attachment HART and WirelessHART added application layer structure and service elements. These additional application-layer structure and service elements support automatic Environments between the device and the application of "strict timing requirements (time-critical)" and "non-time-critical (non-time-critical)" the message communication. The term "time critical" indicates that there is a time window, within this

time window, the defined requirements in a deterministic like Stage to complete the required one or more specified actions. Within the time window does not complete the required actions, these actions will generate a request for applications lost the risk of failure, and even cause accompanying instruments, equipment and possible physical danger.

This section is used to describe the application layer protocol elements of public services and concepts and templates, as described in IEC/T R61158-1.2010 Chapter 9 this section and Appendices C and D.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 9387.1 Information technology - Open Systems Interconnection - Basic Reference Model - Part 1. Basic model (ISO/IEC 7498-1, IDT) GB/T 9387.3 Information technology - Open Systems Interconnection - Basic Reference Model - Part 3. Naming and addressing (ISO/IEC 7498-3, IDT) GB/T 17967 Information technology - Open Systems Interconnection - Basic Reference Model OSI service definition conventions (ISO/IEC 10731, IDT) Type 20 GB/T 29910.2-2013 Industrial communication networks - Fieldbus specifications. HART specification - Part 2. HART Wired network data link layer service definition and protocol specification GB/T 29910.3-2013 Industrial communication networks - Fieldbus specifications - Type 20. HART specification - Part 3. Application layer Service definition (IEC 61158-5-20:2010, IDT) GB/T 29910.4-2013 Industrial communication networks - Fieldbus specifications - Type 20. HART specification - Part 4. Application layer Protocol Specification (IEC 61158-6-20:2010, IDT) GB/T 29910.5-2013 Industrial communication networks - Fieldbus specifications - Type 20. HART specification Part 5. Wire-lessHART wireless communication network and communication profiles (IEC 62591:2010, IDT) IEC/T R61158-1.2010 Industrial communication networks - Fieldbus specifications - Part 1. IEC 61158 and IEC 61784 series Overview and guidance (Industrialcommunicationnetworks-Fieldbusspecifications-Part 1. Overviewandguid-ancefortheIEC 61158andIEC 61784series) IEC 61784-1:2010 Industrial communication networks profiles - Part 1. Fieldbus profile (IEC 61784-1.2010Industrial CommunicationNetworks-Profiles-Part 1. Fieldbusprofiles)