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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3408-1994

Replacing GB/T 3408-1994

**Instrument for dam monitoring -- Strain meter -- Part 1:
Unbonded elastic wire resistance strain meter
(English Translation)**

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Foreword

GB/T 3408 "dam monitoring instrument strain gauge" is divided into four parts.

- Part 1. Differential Resistance Strain Gages;
- Part 2. Vibrating wire strain gauge;
- Part 3. Resistive strain gauges;
- Part 4. Inductance strain gauge.

This section GB/T 3408 Part 1 is the GB/T 3408-1994 "Resistive Strain Gauge" amendment. versus GB/T 3408-1997 compared to the main changes are as follows.

- Increased strain gauge performance parameters in the "reliability requirements" and other relevant provisions;
- Modify the "range", "over range limit", "stability requirements", "anti-transport performance," and so on;
- In the "Specifications and main parameters", added a new size and measurement

specifications;

--- In the "inspection rules", on the "factory inspection" and "type test" provisions of the eligibility criteria were adjusted;

--- In the "test method", supplemented the "reference test atmospheric conditions", "normal experimental atmospheric conditions" and other environmental test conditions content;

--- Modify and supplement the "logo", "Instruction Manual", "packaging", "transport" and "storage" and other related content.

This part of the GB/T 15406 "Geotechnical instrumentation basic parameters and general technical conditions" and other standards have a certain relationship between the convergence, and in the technical content of mutual coordination.

Appendix A of this section is normative appendix.

This part is proposed by the Ministry of Water Resources of the People's Republic of China.

This part of the People's Republic of China Ministry of Water Resources centralized.

This section mainly drafted by. Ministry of Water Resources Hydrographic Instruments and Geotechnical Engineering Quality Supervision, Inspection and Testing Center, the State Power Corporation of Nanjing Power Automation Equipment Plant, State Grid Nanjing Institute of Automation, Ministry of Water Resources Nanjing Institute of Hydraulic and Hydraulics Automation.

Participated in the drafting of this section. National Industrial Products Production Permit Office hydraulic equipment and geotechnical equipment review department.

1 Scope

GB/T 3408 provisions of this part of the differential resistance strain gauge product structure, specifications and parameters, technical requirements, test methods, seized Inspection rules, signs, instructions and packaging, transportation, storage and so on.

This section applies to embedded in concrete structures and rock mass or installed in concrete, rock and other structures on the surface, and can both temperature Degree of differential resistance strain gauge.

2 Normative references

The following documents contain provisions which, through reference in this part of GB/T 3408, become the provisions of this section. Any reference to the date of the citation all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to be reached under this section the parties to the agreement examine whether the latest versions of these documents are available. For

undated references, the latest version applies to this book section.

GB/T 191 Packaging - Pictorial signs GB/T 5080.7-1986 Equipment reliability test Constant failure rate assumption failure rate and mean time to failure test Experience program GB/T 6388 transport packaging shipping symbols GB 9969.1 Industrial Products Manual General GB/T 15406 Geotechnical instrumentation basic parameters and general technical conditions GB/T 15464 General technical specifications for instrumentation package GB/T 50279 Geotechnical basic terminology standards

3 Terms and definitions

GB/T 50279 established and the following terms and definitions apply GB/T 3408 of this section.

Sensor used to measure structural strain.

A pair of differential change of the wire as a sensitive element to measure the strain gauge strain gauge.

The ratio of the two differentially changed wire resistances R_1 and R_2 in the sensing element.

$$Z = R_1 R_2$$

Resistance meter resistance ratio measurement when the input amount corresponding to the resistance ratio change amount is zero.