

JB

Professional Standard of the People's Republic of China

中华人民共和国行业标准

JB/T 4730.5-2005

Replace part of JB 4730-1994

**Nondestructive Testing of Pressure
Equipments - Part 5: Penetrant Testing**

承压设备无损检测 第5部分:渗透检测

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Foreword

JB /T 4730.1~4730.6—2005 "Nondestructive Testing of Pressure Equipments" is divided into six parts:

- Part 1: general requirements;
- Part 2: radiographic testing;
- Part 3: ultrasonic testing;
- Part 4: magnetic particle testing;
- Part 5: penetrant testing;
- Part 6: eddy current testing;

This part is the fifth part of JB /T 4730.1~4730.6—2005: penetrant testing. This part is established by making reference to the relevant requirements of volume SE-165 "Recommended Operating Methods for Liquid Penetrant Testing Standard" in ASME "Boiler and Pressure Vessel Code" and combined with domestic actual situation. The main difference compared with JB 4730—1994 are as follows:

1. Added normative references.
2. Added the classification of sensitivity level.
3. Added the content of quality control.
4. Added the penetrant testing for pressure equipments in use as well as the fluorescent penetrant testing for high tensile steel and crack sensitive material.
5. Added the chapters of penetration basic procedure and penetrant testing time.

Annex A and Annex B of this part are normative.

This part is proponed by National Technical Committee on Boilers and Pressure Vessels of Standardization Administration of China (SAC/TC 262).

This part is under the jurisdiction of National Technical Committee on Boilers and Pressure Vessels of Standardization Administration of China (SAC/TC 262).

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Nondestructive Testing of Pressure Equipments

Part 5: Penetrant Testing

1 Scope

This part in JB/T 4730 specifies the liquid penetrant testing methods and quality grading of pressure equipments.

This part is applicable for the test of surface breaking defects of non-porous metal material or non-metallic material caused during manufacture, installation and using.

2 Normative References

The following standards contain provisions which, through reference in this part of GB/T 5465, constitute provisions of this part. For dated reference, subsequent amendments to (excluding correction to), or revisions of, any of these publications do not apply. However, the parties whose enter into agreement according to these specifications are encouraged to research whether the latest editions of these labels are applied or not. For undated references, the latest edition of the normative document is applicable to this part.

GB/T 5097 Method for Indirect Assessment of Black Light Sources

GB/T 5616 Guidelines for Application of Conventional Nondestructive Testing Methods

GB 11533—1989 Standard Logarithmic Visual Acuity Charts

GB/T 12604.3 Terminology for Nondestructive Testing Penetrant Testing

GB/T 16673 Measurement of UV-A Radiation (Black Light) Used in Non-Destructive Testing

JB/T 4730.1 Nondestructive Testing of Pressure Equipments Part 1: General Requirements

JB/T 6064—1992 Chromium-Plating Block for Penetrant Testing Technical Specifications

JB/T 9213—1999 Non Destructive Testing - Penetrant Testing - A Type Comparator Block

JB/T 9216 Methods for Controlling the Quality of Liquid Penetrant Materials

3 General Requirements

The general requirements of penetrant testing shall not only meet the relevant provisions of JB/T 4730.1, but shall also meet the following provisions.

3.1 Penetrant testing personnel

The near (distance) vision and far (distance) vision (rectified or not) of the penetrant



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