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

GB/T 32529-2016

**Technical requirements for the recovery and discharge of heat
treatment cleaning waste liquid**

热处理清洗废液回收及排放技术要求

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Standardization Technical Committee heat treatment (SAC/TC75) and focal points. This standard is drafted by: Nanjing Branch of China Industrial Media Co., Ltd., Beijing Institute of Electrical and Changzhou New Area Hohai Heat Treatment Engineering Co., Ltd., Jiangsu Feng East of Technology Co., Ltd., Shanghai Institute of Machinery Manufacturing Technology Co., Ltd., Xian Fu Wright heat treatment Limited. Participated in the drafting of this standard. Anhui Ou Sa Health Laboratory Technology Co., Ltd. on the Evaluation and Advisory Ousa. The main drafters of this standard. Zhu Jian Jian, Li Qiao, Yin peace, Nie Xiaolin, to Jianhua, Ye Jian, Guoqiao Ling, Wang Xiaobing. Heat treatment cleaning liquid recovery and emission technical requirements

1 Scope

China's national technical requirements for the recovery and discharge of the waste cleaning liquid produced by heat treatment. It specifies the methods of analysing the contaminants in that waste, the methods of treating and disposing of it, and the technical requirements for its recovery and discharge, and it applies to the treatment and discharge of the waste water of heat treatment production and processing plants. Heat treatment produces a waste stream that is easy to overlook, because the process itself appears clean: parts go into a furnace and come out hardened. But almost every heat treatment operation includes washing. Parts arrive covered in machining oil and must be degreased before they enter a furnace, because oil carbonises and contaminates the atmosphere; they leave a quench tank covered in quench oil or in salt and must be washed again before tempering or before dispatch. The liquid used for that washing accumulates everything it removed - oil, quenching salts, metal fines, and the alkaline detergent itself - and it eventually has to be replaced. What comes out is a mixed waste containing free and

emulsified oil, suspended solids, heavy metals leached from the parts and the equipment, and, where nitrate-nitrite salt baths are used, nitrogen and nitrite in solution. That is why the analytical methods listed run to a full page of water quality standards: pH, copper, zinc, lead, cadmium, iron, manganese, barium, vanadium, fluoride, sulfide, total phosphorus and suspended solids each have their own national method, and the treatment route cannot be chosen until the waste has been characterised. Issued on 24 February 2016 and in force since 1 September 2016.

This standard specifies the method of analysis of heat treatment cleaning waste contaminants, waste treatment and disposal methods, waste recycling and emission technical requirements. This standard applies to production and processing plant and the heat treatment of waste water treatment and discharge.

2 Normative references

The following documents for the application of this document is essential. For cited documents with dates, only the dated edition applies to this document. For undated references, the latest edition (including any amendments) applies to this document.

Determination of the glass electrode method

GB 6920 Water pH value Determination of

GB 7472 Water quality zinc dithizone spectrophotometry

GB/T 7475 Water quality copper, zinc, lead, and cadmium - Atomic absorption spectrophotometry

GB/T 7484 Water quality - Determination of fluoride ion selective electrode method

GB 8978 Integrated Wastewater Discharge Standard

GB 11893 Determination of total phosphorus - Ammonium molybdate spectrophotometric method

GB 11901 Water quality Determination of suspended solids - Gravimetric method

GB 11906 Water quality Determination of manganese potassium periodate spectrophotometric

GB 11911 Water quality iron, and manganese - Flame atomic absorption spectrophotometry

GB/T 14671 Quality barium potentiometric titration Determination of

GB/T 15503 Quality vanadium tantalum reagent (BPHA) extraction spectrophotometry

GB/T 16489 Water quality Determination of sulfide - Methylene blue spectrophotometric method

GB/T 30822 requirements for heat treatment Environmental Technology

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