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

中华人民共和国机械行业标准

JB/T 5000.7-2007

Replace JB/T 5000.7-1998

**Heavy mechanical general techniques and standards
—Part 7: Repair welding for steel castings**

**重型机械通用技术条件
第 7 部分：铸钢件补焊**

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Foreword

JB/T 5000 《Heavy mechanical general techniques and standards》 divided into 15 parts:

- ___ Part one : Product Inspection
- ___ Part two: Oxygen cutting workpiece
- ___ Part three: Weldment
- ___ Part four: Iron casting
- ___ Part five: Cast nonferrous metal
- ___ Part six: Cast steel
- ___ Part seven: Cast Steel repair welding
- ___ Part eight: Forging
- ___ Part nine: Cutting workpiece
- ___ Part ten: Assembly
- ___ Part eleven: Tubing
- ___ Part twelve: Painting
- ___ Part thirteen: Packing
- ___ Part fourteen: Cast steel nondestructive examination
- ___ Part fifteen: Forging steel nondestructive examination

This part is JB/T 5000's seven two.

This part is instead of JB/T 5000.7-1998 《Heavy mechanical general techniques and standards Repair welding for casting steel》

This part compare to the JB/T 5000.7-1998,the main changes are as follow:

- ___ Added the preheat temperature and the selection of the welding material which is relevant with the material ZG25Mn,ZGMn13-5's casting steel.
- ___ Added the technology requirement of the back chipping
- ___ Added the CO₂ welding's technology requirement
- ___ Added the starting arc's specified requirement.
- ___ Added the interpass temperature grade's specified requirement.
- ___ Added the deficiency grade's specified requirement.

This part's appendix A and appendix B are informative annexs.

This part is offered by the China Machinery Industry Association.

This part is centralized management by the engineering industry metallurgical equipment technical committee for standardization.

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This part's previous edition:

—JB/T 5000.7—1998

Heavy mechanical general techniques and standards

Part 7:Repair welding for steel castings

1 Scope

This part JB/T 5000 specify the prepare welding's technology requirements of the cast iron,repair welding's technology requirements,heat-treatment after welding and the testing,etc.

This part is applicable to the carbon steel, low alloyed steel and the high manganese steel's deficiency repair welding before the finished machining.

2 Normative Reference

Through the quoted by JB/T 5000 , Following documents' items are become to the items of this parts.Any quoted documents if it is dated,the following modify notification (not including the errata contents) or modify edition are not apply to this part.But,the agreement which is according to this part can use this parts' latest edition. If it's not dated,it's latest edition can apply to this part.

GB/T 984 surfacing electrode (GB/T 984—2001,eqv ANSI/AWS A 5.13)

GB/T5117 Carbon steel covered electrode (GB/T 5117—1995,eqv ANSI/AWS A 5.1:1991)

GB/T5118 Llow-alloy steel covered arc welding electrode (GB/T 5118—1995, neqANSI/AWS A5.20:1995)

GB/T10045 Carbon steel flux cored electrodes for arc welding (GB/T10045 — 2001;eqv ANSI/AWS A5.20:1995)

GB/T17493 Low alloy steel flux cored electrodes for arc welding (GB/T17493—1998 , eqvANSI/AWS A5.29:1980)

GB/T8110 Gas shield carbon steel, low alloy steel flux cored electrodes for arc welding (GB/T8110—1995, neqANSI/AWS A5.18:1979)

GB/T5680 High manganese steel castings

GB/T 6417.1 Molten metal soldered joint deficiency classify and instruction (GB/T6417.1—2005, ISO6520: 1998, IDT)

JB/T3223 Welding material quality management series

JB/T5000.6 Heavy mechanical general techniques and standards Part six: Casting steel

JB/T6404 Large high manganese cast steel

3 Prepare welding's technology requirement

3.1 Clear deficiency and the groove types

3.1.1 You must to clean the deficiency before the repair welding completely.The groove surface must be smooth and not allowed the sharp angle.

3.1.2 According to the deficiency situation about the cast iron,the deficiency repair welding area can use the clay digger,grind, carbon arc gouging, gas cutting or the mechanical machining etc.method to clean.For the poor weldability cast iron,when you use the carbon arc gouging and gas cutting to clean the deficiency,you must according to the table 1 to preheat and then clean the deficiency.After the carbon arc gouging,you must polish to removing the carburet layer.

3.13 The repair welding area and the groove circumference within the 20mm's sand

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