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**General technical specification for the centralized smelting and
distribution of aluminium alloy melt**

压铸用铝液集中熔炼配送通用技术规范

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Foreword

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Chuanwei, Ma Jianhua, Wu Yuying, Ruan Dexin, Ye Li, Liang Wen, Liu Jun, Lv Qing, Yao Zhihao, Dai Feng, Fu Caiming, Sun Pu, Zhang Yuyan, Chen He, Yang Liguang, Yuan Xiaodong, Xuan Pengcheng, Zhang Jixun, Li Heng, Pang Dong, Mo Hongbo, Li Zhenming, Wang Haibo, Sun Jin, Hao Caihui, Lin Yongxing, Hu Chaosu, Zhou Shangyou, Li Ping and Lin Xiaolong: General technical specification for centralized smelting and distribution of molten aluminum for die casting Warning: People who use this document should have practical experience in smelting field work: This document does not address all possible safety issues: The user is responsible for taking appropriate safety measures and ensuring that the conditions stipulated by relevant national laws and regulations are met:

1 Scope

China's national general technical specification for centralised melting and distribution of aluminium alloy melt. The arrangement replaces the melting furnace in each foundry with a central melting plant that supplies liquid metal to several users in insulated transport ladles. The saving is substantial: melting is where nearly all a foundry's energy goes, a large central furnace is far more efficient than several small ones, and remelting ingot that was cast from liquid metal a few kilometres away is an obvious waste of the heat already put into it. Its requirements are those of a supply chain rather than a machine - the metal must arrive at the right temperature and composition, within a time window, in a ladle whose thermal performance is known, with the quality assured before dispatch because the customer cannot correct it. Transporting several tonnes of molten aluminium by road is the part the specification treats most carefully.

This document specifies the process specifications, technical requirements, and inspection methods for centralized smelting and distribution of die-cast aluminum alloy molten metal (hereinafter referred to as "aluminum liquid") and inspection rules: This document applies to the centralized smelting and distribution of die-casting aluminum liquid:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document:

GB 1589 External dimensions, axle loads and mass limits for vehicles, trailers and vehicle trains

GB/T 5611 Casting Terminology

GB/T 7999 Photoelectric direct reading emission spectroscopy analysis method for aluminum and aluminum alloys

GB 11567 Requirements for side and rear lower protection of motor vehicles and trailers

GB 13392 Vehicle signs for road transport of dangerous goods

GB/T 15115 Die-casting aluminum alloy

GB 20905 Safety requirements for casting machinery GB/T 20975:

3 Chemical analysis methods for aluminium and aluminium alloys Part 3: Determination of copper content GB/T 20975:

4 Chemical analysis methods for aluminium and aluminium alloys Part 4: Determination of iron content GB/T 20975:

5 Chemical analysis methods for aluminium and aluminium alloys Part 5: Determination of silicon content GB/T 20975:

7 Chemical analysis methods for aluminium and aluminium alloys Part 7: Determination of manganese content GB/T 20975:

8 Chemical analysis methods for aluminium and aluminium alloys Part 8: Determination of zinc content GB/T 20975:

10 Chemical analysis methods for aluminium and aluminium alloys Part 10: Determination of tin content GB/T 20975:

3 Terms and definitions

The terms and definitions defined in GB/T 5611 and the following apply to this document: