

HIGH-ALUMINUM AUSTENITIC ALLOY HAVING EXCELLENT HIGH-TEMPERATURE ANTICORROSION CAPABILITIES AND CREEP RESISTANCE

Abstract

The present invention provides a high-aluminum austenitic alloy and a high-aluminum austenitic centrifugal casting pipe. The high-aluminum austenitic alloy and the high-aluminum austenitic centrifugal casting pipe have excellent anti-corrosion capabilities and creep resistance at a temperature of 900°C or above, while having required mechanical properties. In weight percentage, the high-aluminum austenitic alloy or the high-aluminum austenitic centrifugal casting pipe of the present invention is composed of the elements of: C, 0.3-0.7%; Mn, 0-0.5%; Si, 0-0.5%; Cr, 20-26%; Ni, 40-50%; Al, 3.5-5%; Ti, 0.01-0.3%; Zr, 0.01-0.3%; Nb, 0.1-1%; Ta, 0.01-2%; Mo, 0.01-1%; W, 0.01-1.9%; N, 0.001-0.04%; Re, 0.03-0.3%; the remainder being Fe and inevitable impurities. The present invention also relates to a method for manufacturing the high-aluminum austenitic alloy and the high-aluminum austenitic centrifugal casting pipe of the present invention.

<No suitable drawing>