

36% Nickel - Iron 합금의 자동 GTA 용접부 반점 형성에 미치는 용접 변수의 영향

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Effect of Welding variables on White Spots Formation on the autogeneous GTA Welds of 36% Nickel - Iron alloy.

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Abstract

36 percent nickel-iron alloy possesses a useful combination of low thermal expansion, moderately high strength and good toughness at temperatures down to that of liquid helium, -269°C . These properties coupled with good weldability and desirable physical properties make this alloy attractive for many cryogenic applications such as the cargo containment system in Liquefied Natural Gas carriers and pipes for low temperature.

Generally, welding method of the 36% nickel-iron is applied with the manual and autogeneous GTAW. Lately white spots have been observed on the some autogeneous GTA welds of them. But the white spot formation have not been studied yet. This paper covers the analysis results of the white spots formation as changing welding variables.

Key Words : 36%Ni-iron alloy, White spot, GTAW, minor elements