Explosion Bulge Test in air has been carried out in order to evaluate base metal and weldment of pre-heating free steel, PFS-700 which was developed for using in submarine, destroyer and aircraft carrier and specified as Korean military specification, KDS-9515-3001. PFS-700 steel has good weldability so that it can be welded without pre-heating before welding. 1.4wt.% of Copper is added to compensate for the decrease of strength due to the decrease of Carbon in PFS-700. Usually, PFS-700 is aged at the temperature of about 650°C for the combination of strength and toughness. PFS-700 of the thickness of 25mm aged at 650°C was used for explosion bulge test. Underwater weapon system demands to conduct this test for the security of weld structures, and test method and procedure are specified in the military specification, MIL-STD-4139(SH). PFS-700 was explosion bulge tested as specified in this spec. Mechanical tests such as tensile test, CVN impact test are conducted from the specimens taken from prolonged EBT specimen and compared with the properties specified in KDS-9515-3001.

Autor nedodal plný text příspěvku.

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