

Mn-Ni-Mo SQV 2B

Mechanical Properties of High-Strength Mn-Ni-Mo Steel for Nuclear Power Plant

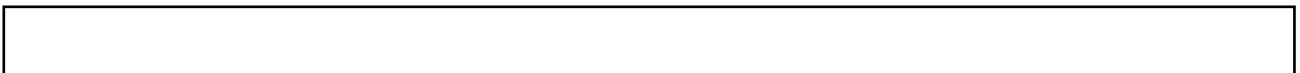
|        |                       |                     |       |
|--------|-----------------------|---------------------|-------|
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| Sugie) | (Takahiro Kubo)       | (Masanobu Sato)     |       |

:  
 1150 MW (PWR)  
 SQV 2B(TS(63 kgf/mm<sup>2</sup>) 100 mm  
 P S AS Sb  
 SAW MIG  
 RTNDT 45 HAZ  
 501 ( 55 ) KIR

Synopsis :

High strength JIS SQV 2B 100 mm thick plate for the steam generator of a 1150 MW class pressurized water reactor type plant is manufactured and its characteristics are examined. Because of the reduction of impurities such as P, S, As and Sb in steel, the segregation of the elements and variations of mechanical properties in the whole plate are minimized. The yield and tensile strengths at ambient and high temperatures and impact properties of base material and welded joints by SAW and MIG fulfill the specifications. Furthermore those RTNDT's are lower than -45 . The static and dynamic fracture toughness and the crack arrest fracture toughness are higher than those of KIR curve specified by MITI No.501. From these results, it is concluded that this material has sufficient safety for this purpose.

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# 原子力プラント用高強度 Mn-Ni-Mo 鋼 SQV 2B の材質特性\*

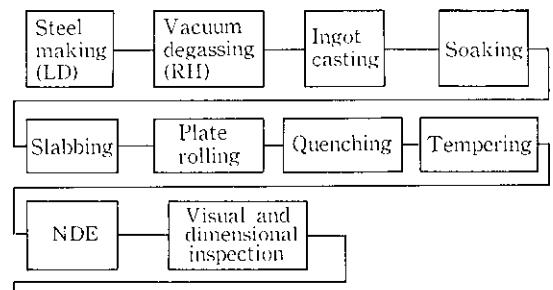
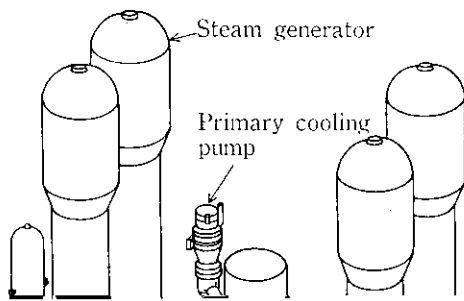
川崎製鉄技報  
18 (1986) 4, 314-320

## Mechanical Properties of High-Strength Mn-Ni-Mo Steel for Nuclear Power Plant

### 要旨

1150 MW 級の加圧水型 (PWR) 原子力発電プラントの蒸気発生器用鋼板を想定して、高強度鋼板である SQV 2B ( $TS \geq 63 \text{ kgf/mm}^2$ ) の板厚 100 mm 鋼板を製造し、その特性を調べた。鋼材は P、S、As

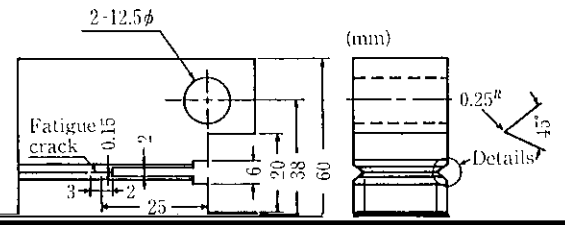
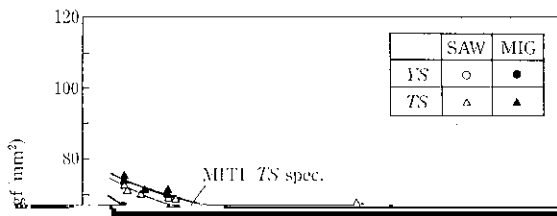




JIS の規格内であり、取鍋分析値ともよく一致しており、鋼板内で







### 3.3.2 動的破壊靱性試験

Hammer

微三 鋼板厚さ 10mm → 本邦用鋼板厚さ 12.5mm 相当