

FOX

Stress Analysis of Premium Threaded Connection "FOX" by Finite Element Method

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Synopsis :

The principal feature of the premium threaded connection "FOX" is the introduction of pitch change connections. The FOX design was developed mainly by the finite element analysis (FEA) which sufficiently simulated the actual behaviors of the made-up and/or tensile loaded connection. Results of FEA prove that joint characteristics such as anti-galling, leak tightness, and joint strength are greatly improved

# 有限要素法による油井管用プレミアムジョイント “FOX” の特性解析\*

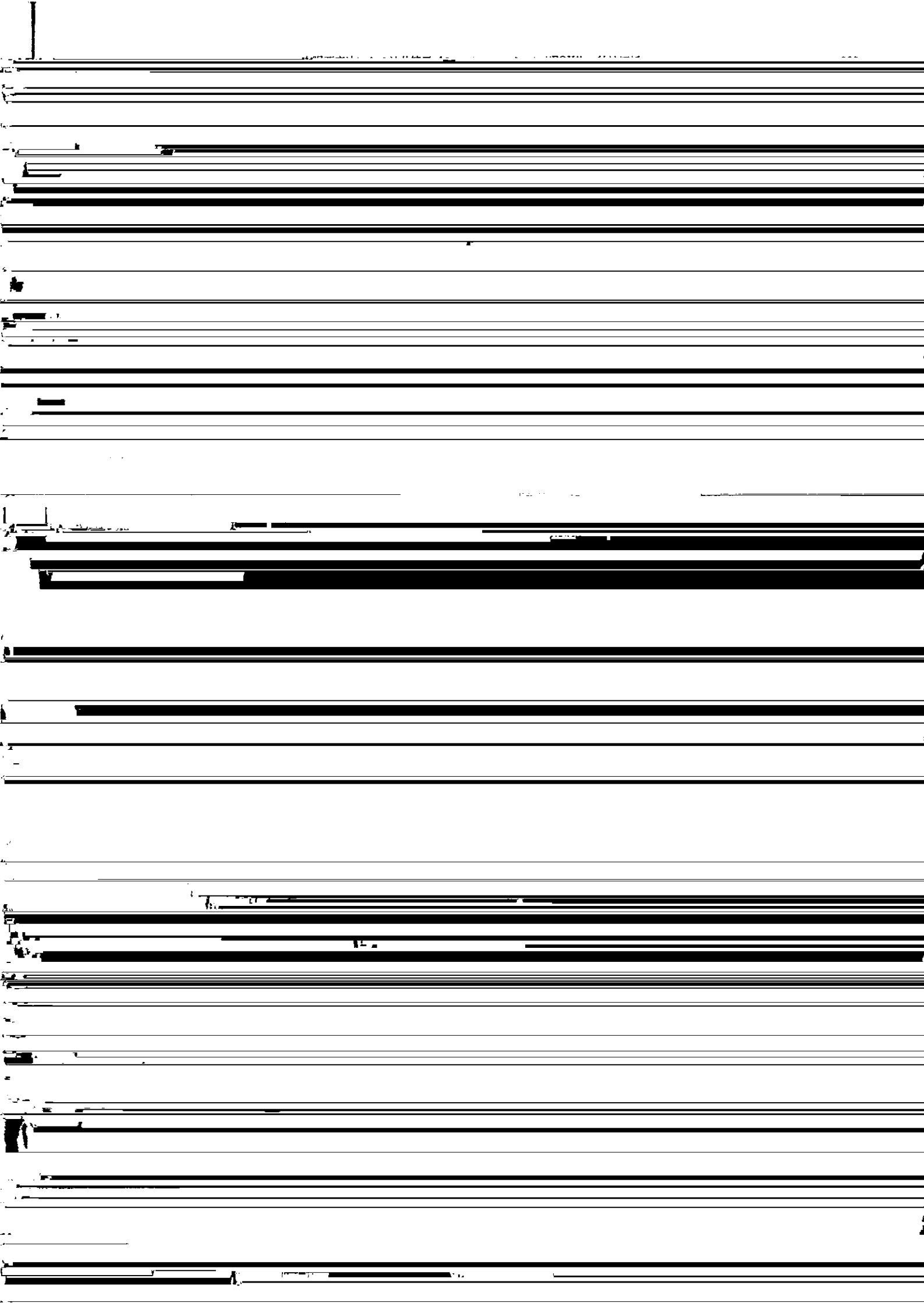
川崎製鉄技報  
21 (1989) 3, 202-207

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### 要旨

油井管用プレミアムジョイント“FOX”の最大の特長は、ピッチ  
チェンジ法という新しい概念を導入しているところにある。これ  
は、ネジピッチを途中で変更することにより歯にかかる接触面圧分





Coupling



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L80, 3-1/2" x 9.2 lbs/ft  
— Measured curve

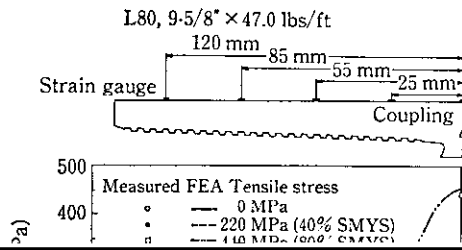


Table 2 Conditions of FEA on the joints of API L80 carbon steel (2-7/8" × 6.4 lb/ft, yield strength 552 MPa)

Joint type	Amount of pitch change
1	2 × PC
2	1 × PC
3	1/2 × PC
4	0 (without pitch change)

