



DET NORSKE VERITAS
NORWAY

Serlachius
T-Drill Division

PL 20
SF-66400 LAIHIA
Finland

ADDRESS: VERITASVEIEN 1, HØVIK
POSTAL ADDRESS: P.O. Box 300, N-1322 HØVIK,
OSLO, NORWAY
TELEPHONE: (02) 12 99 00/12 99 55
CABLE ADDRESS: VERITAS, OSLO
TELEX: 76192 VERIT N
FACSIMILE: (02) 12 98 71
BANKERS: DEN NORSKE CREDITBANK
ACCOUNT NO. 7131.05.05700
FELLESBANKEN A/S, OSLO
ACCOUNT NO. 8200.01.33554

YOUR REF.

OUR REF.

DATE

SD-296/Käe/KiH

24.2.83

Dear Sirs,

EXTRUDED T-JOINTS MADE BY T-DRILL METHOD

For our consideration we have received the following documents:

1. Research reports from Technical Research Center of Finland: A 5213/76, MET 08408, MET 08493, MET 1832 and MRG 1132
2. T-drill machine T-150 and T-500 Instruction Manuals
3. "Corrosion Properties of Austenitic Stainless Pipe Tee Branching made by T-drill Method". University of Oulu.
4. Research Report dated 29.3.1982. Helsinki University of Technology.

On the basis of information received we have the pleasure to inform you that no objection is seen to the use of the T-drill method for manufacturing of T-joints in piping systems for Class I, II and III, including liquid chemicals and low temperature services (Lng, Lpg), for ships and mobile offshore units built to Veritas class.

However, the following items are to be fulfilled:

1. Consent of the local Veritas surveyor is to be obtained in each separate case.
2. Approved materials: carbon steel (NVR-1 group), stainless steel, copper, copper-nickel 90/10 and 70/30, aluminium brass.
3. The materials to be used in production of the tube accessories manufactured with T-drill method are to be certified according to the Rules (Pt. 4 Ch. 1 Sec. 2); otherwise they are to be tested according to the same Test Class as required for the tubes or pipes belonging to the same integral pipe system.
4. In special cases, for instance in order to avoid stress corrosion cracking, heat treatment may be required after cold forming.
5. T-drill method is to be used according to the Instruction Manual. The forming pins of the T-drill machine must be in good condition so that the surface of the

final T-joint is good. Pickling with a pickling paste is recommended for austenitic stainless steels as a post surface treatment.

6. The design criterias in the Rules are to be satisfied, as well as the general Rules of the Society in all other respects.
-

Yours Faithfully,
for DET NORSKE VERITAS


J. Zaafeng
Principal Surveyor


J. Käenniemi