



**BUREAU
VERITAS**

BV Job n°1860090

Cert. n° 09/Bd/004

INDEPENDENT REVIEW CERTIFICATE

Issued within the scope of Bureau Veritas General Conditions

Manufacturer : FLUID CONTROL EUROPE

Description : FLOWHEAD - TFH00200 - 10000 Psi - H2S Service

Performance : Design Working Pressure (PW) : 10,000 Psi (690 bar) for 250°F (121°C) max

Criteria : Design Test Pressure (PT) : 15,000 Psi (1034 bar)
Service Temperature Range (TS) : -20°F to 250°F (-29°C to 121°C)
Design External Loads : 400,000 Lbs (181488 Kg)
Service : H2S

Exclusions : Not specified

Drawings and Design Data : Drg. N° TFH00200 Integral Version
: Drg N° 8802752 Integral Version

Material : Yield: $\geq 75,000$ psi - Tensile: $\geq 95,000$ psi -
A% Elongation : $\geq 17\%$ - Notch Toughness : \geq
See note - Max. Hardness ≤ 22 HRC - Note :
The Material: Alloy steel must be
conforming at the specification NACE MR
01-75.

Manufacturing Standard : Fluid Control Europe Ltd Data Package

Design References : Calculation note 09/07/2 rev. 00
: API Spec. 7 / API RP 7G : 14th edition 2004
: API 6A : 19th edition 2004

The above design has been reviewed against the specified design references. As a result, BUREAU VERITAS considers that equipment manufactured to this design will satisfy the specified performance criteria. Consequently, this certificate is considered to contribute towards a duty holder's obligation for the verification of the equipment's design under the requirements of the following regulations and / or associated guidance:

- American Petroleum Institute API 6A : 19th edition 2004
- American Petroleum Institute API Spec. 7 / API RP 7G : 14th edition 2004
- NACE MR 01-75: edition 2003

Made at Clermont Ferrand
The September, 07th 2009

Validated Technical Engineer


D. BOUCARD

Note: The above certificate is not valid until the Engineer and the Validator have signed the certificate.
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