



CERTIFICATE NUMBER

04-HG469375-PDA

DATE

11 October 2004

ABS TECHNICAL OFFICE

Hamburg Engineering Services

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
KM Europa Metal AG

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid for five years from the date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Flanges, CuNi

MODEL: Not Applicable

ABS RULE: 2004 Steel Vessel Rules 1-1-4/3.7, 4-6-2/5.5.4, 2001 MODU Rules 4-2-2/15

OTHER STANDARD: ANSI B16.5, BS 1560 (1/2" - 24"), MSS SP-44 (28" - 36");

AMERICAN BUREAU OF SHIPPING

Hartmut Grommel

Engineering Type Approval Co-ordinator



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PRODUCT: Fittings, CuNi

MODEL: Not Applicable

ABS RULE: 2004 Steel Vessel Rules 1-1-4/3.7, 4-6-2/5.5, 2001 MODU Rules 4-2-2/11

OTHER STANDARD: ANSI B16.9;

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Hartmut Grommel
Engineering Type Approval Co-ordinator



CERTIFICATE NUMBER

DATE

04-HG465440-PDA

11 October 2004

ABS TECHNICAL OFFICE
Hamburg Engineering Services

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PRODUCT: Tubing, CuNi

MODEL: Not Applicable

ABS RULE: 2004 Steel Vessel Rules 1-1-4/3.7, 4-6-2/5.1, 2001 MODU Rules 4-2-2/5.9/ 5.11

OTHER STANDARD: N.A.:

AMERICAN BUREAU OF SHIPPING

Hartmut Grömmel
Engineering Type Approval Co-ordinator