



## *Confirmation of Type Approval*

This is to certify that, pursuant to the Rules of American Bureau of Shipping (ABS), on 19/OCT/2005 the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) and a valid Product Design Assessment (PDA) for the below listed product, entitling the product to Type Approval. The validity of the Manufacturing Assessment is dependent on satisfactory audits as required by the Rules. The Product Design Assessment is valid only for products intended for use on ABS Classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

For Date of ABS Rules used for evaluation; Please refer to the ABS Rules below.

This Confirmation of Product Type Approval is valid as of the date shown above for the below listed product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for evaluation.

Due to a wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that the Client has full responsibility for continued compliance with the evaluation standard, whether the standard is an ABS Rule or a non-ABS Rule. As specified in the ABS Rules, Unit Certification may be required in addition to Product Type Approval. Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

**Copper State Rubber, Inc.**

**Model Name(s): Specification no. 090-19225HT-48**

**Presented to:**

Copper State Rubber, Inc.  
P.O. Box 14126  
750 South 59th Ave  
Phoenix  
Arizona 85043  
United States of America

**Intended Service:**

Drilling Systems

**Description:**

3" 15KSI MAWP Super Choke/Kill Hose Assembly with 40" Bend Radius and 3" ID x 4.5" Butt weld Inserts. Specification No: 090-19225HT-48. Offshore, Oilfield and Industrial Hoses

**Ratings:**

Component Operating Envelope: Maximum Working Pressure: 15,000 psi;  
Minimum Design Temperature: Minus 20 degrees C (Minus 4 degrees F);  
Maximum Design Temperature: 130 degrees C (266 degrees F); Intermittent Temperature Rating (Survival Condition) : 204.4 degrees C (400 degrees F).  
Hydrogen Sulfide Service, Calcium Di-Chloride, Calcium Di-Bromide, Zinc Di-Bromide Brine Drilling Fluid Mixture Contained within completion fluids.

**Service Restrictions:**

Unit Certification is required for this product.

**Comments:**

This product is considered to be in compliance with the ABS Quality Assurance Certification criteria.

**Notes / Documentation:**

**Term of Validity:**

This product/model is covered under Product Design Assessment (PDA) Certificate # 04-HS430194B/1-PDA, dated 17/Oct/2005. This PDA Certificate expires Oct of 2010. It will remain valid for the 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first).

**ABS Rules:**

2005 Steel Vessel Rules 1-1-4/7.7 2004 ABS Guide for Certification of Drilling Systems

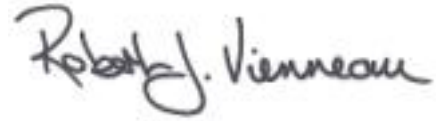
**National Standards:** API SPEC. 16A, ASME Section VIII Div. 2, APP.4, NACE MR-0175

**International Standards:**

**Government Authority:**

**EUMED:**

**Others:**



Manager, ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.