



CERTIFICATE NUMBER

07-HG218760/1-PDA

DATE

27 April 2007

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

## **R. STAHL Schaltgeräte GmbH**

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 as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

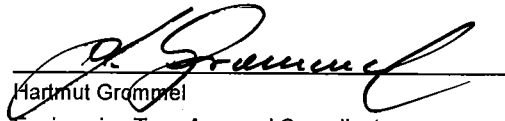
PRODUCT: Remote I/O System I.S. 1

MODEL: Series 94, Fieldbus Isolating Repeater Series 9185

ABS RULE: 2007 Steel Vessel Rules, 1-1-4/7.7, 4-8-3/13, 4-9-7/7/13

OTHER STANDARD: N.A.;

AMERICAN BUREAU OF SHIPPING



Hartmut Grommel

Engineering Type Approval Co-ordinator

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**Product:** Remote I/O System I.S. 1**Model:** Series 94, Fieldbus Isolating Repeater Series 9185**Intended Service:**

Remote Input/ Output Modules and Fieldbus Isolating Repeaters in control and monitoring systems, for use in hazardous areas.

**Description:**

Certified explosion proof/ intrinsically safe modular system for 35 mm DIN rail mounting.

CPU and Power Modules 9440/12/15/22 (PTB 00 ATEX 2052/ PTB 99 ATEX 2222/ KEMA 02 ATEX 1333X).

Analog Input Modules 9460, 9461 (PTB 99 ATEX 2175 and KEMA 06 ATEX 0291X).

Analog Output Modules 9465, 9466 (PTB 99 ATEX 2207 and KEMA 06 ATEX 0291X).

Digital Input Modules 9470 (PTB 99 ATEX 2184 and KEMA 06 ATEX 0291X), 9471 (KEMA 06 ATEX 0291X).

Digital Output Module 9475 (PTB 99 ATEX 2220).

Digital Output Module Relays 9477/12 (PTB 01 ATEX 2205), 9477/15 (PTB 01 ATEX 2187/ 2188).

Temperature Input Modules 9480 (PTB 00 ATEX 2123), 9481 (PTB 00 ATEX 2124).

Fieldbus Isolating Repeater (to be mounted in RF shielded cabinet) 9185 (DMT 02 ATEX E 246 X).

I.S. 1 System Accessories 94 (PTB 04 ATEX 2089).

Enclosures 8126 (PTB 03 ATEX 1059U/ 1060), 8127 (IP54).

Cable Glands 8163 (SIRA 06 ATEX 1043X/ 1044X/ 1047X/ 1188X/ 3042X/ 3045X).

**Ratings:**

Power Supply: 24V DC or 90...250V AC, depending on CPU and Power Module.

Fieldbus communications: Modbus RTU, Profibus DP V0 and DP V1 HART.

**Service Restrictions:**

Unit Certification is required for this product.

**Comments:**

Each particular application/ installation is to be specifically approved in conjunction with the relevant system, area classification, and environmental conditions.

The system is to be installed in an enclosure with a minimum degree of protection of IP54 (series 8126 or 8127, equipped with cable glands series 8163).

**Notes/Documentation:**

This Product Design Assessment (PDA) 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.

**Term of Validity:**

This Design Assessment Certificate number 07-HG218760/1-PDA, dated 27/Apr/2007 will expire on 26/Apr/2012 or at an earlier date should there be alterations to the product's design or changes to the referenced ABS Rules and other specifications, which affect the product. Product use on or after 1 January 2008, will be subject to compliance with the ABS Rules or specifications in effect when the vessel, MODU or facility is contracted. The product's acceptability on board ABS-classed vessels or facilities is defined in the service restrictions of this certificate.

**STANDARDS****ABS Rules:**

2007 Steel Vessel Rules, 1-1-4/7.7, 4-8-3/13, 4-9-7/7/13