

Approval of Material Manufacturers
Zulassung von Werkstoffherstellern



Germanischer Lloyd

This is to certify that the works of
Hiermit wird bescheinigt, dass die Firma

**VITKOVICE STEEL A.S.
OSTRAVA-HULVAKY
CZECH REPUBLIC**

has been subjected to an approval test in accordance with the Society's Rules with satisfactory results and is approved for the manufacture of the following products:

einer Zulassungsprüfung nach den Vorschriften des Germanischen Lloyd unterzogen wurde und für die Herstellung folgender Erzeugnisse zugelassen ist:

Steel plates

in

- **Normal and higher strength hull structural steels**
 - **Unalloyed steels for welded structures**
- in accordance with GL-Rules for Metallic Materials,
Chapter 2, Section 1, B. and C.**

This approval is granted provided that all products intended to be used for the construction of ships or installations classed with Germanischer Lloyd comply in every respect with the Society's Rules and Requirements

Die Zulassung erfolgt unter der Voraussetzung, dass alle Erzeugnisse, die zum Bau von Schiffen und Anlagen mit Klasse des Germanischen Lloyd bestimmt sind, die Vorschriften des Germanischen Lloyd in jeder Hinsicht erfüllen.

Certificate of approval No.
Zulassungsbescheinigung Nr.

WZ 1183 HH 2

This Certificate is valid until:
Diese Bescheinigung ist gültig bis:

2010-08-31

Part of the approval is our letter of approval ref. no. 121005-06 of 2006-11-27.
Bestandteil der Zulassung ist das Zulassungsanschreiben, Tgb.-Nr. 121005-06 vom 2006-11-27.

Hamburg, 2006-11-28

Germanischer Lloyd


Michael Kühnel


Sven Koller



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Enclosure to Certificate No.:
Anlage zu Bescheinigung Nr.:

WZ 1183 HH 2

Germanischer Lloyd

Scope of approval
Zulassungsumfang:

Date of approval: 2006-11-27
Zulassungsdatum:

| Product Produkt | Steel Grade Stahlgüte | Deoxidation Deoxidation | Microalloying Elements Mikroleg.-Elemente | Casting Method Gießmethode (1) | Delivery Condition Lieferzustand (2) | max. Thickness [mm] max. Dicke [mm] | Remarks Bemerkungen |
|--------------------|--------------------------|----------------------------|--|-----------------------------------|---|--|------------------------|
| steel plates | GL-A | FeSi/Al | | CC | AR | 50 | |
| steel plates | GL-A | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-A | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-A | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-B | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-B | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-B | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-D | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-D | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-D | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-D | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-E | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-E | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-E | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-A32 | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-A32 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-A32 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-A36 | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-A36 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-A36 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-D32 | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-D32 | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-D32 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-D32 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-D36 | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-D36 | FeSi/Al | | CC | CR | 50 | |
| steel plates | GL-D36 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-D36 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-E32 | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-E32 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-E32 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | GL-E36 | FeSi/Al | NB+V | CC | N | 50 | |
| steel plates | GL-E36 | FeSi/Al | NB+V | CC | N | 70 | |
| steel plates | GL-E36 | FeSi/Al | NB+V | IC | N | 70-100 | |
| steel plates | S235J0 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S235J0 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S235J2 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S235J2 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S235JR | FeSi/Al | | CC | N | 100 | EN10025-2 |

(1)
CC = continuous casting
IC = ingot casting

(2)
CR = controlled rolled
N = normalised
TM = thermomechanically rolled
AR = as rolled

S + Q = solution annealed + quenched

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|--------------------|--------------------------|----------------------------|--|-----------------------------------|---|--|------------------------|
| steel plates | S235JR | FeSi/Al | | CC | AR | 50 | EN10025-2 |
| steel plates | S235JR | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S275J0 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S275J0 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S275J2 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S275J2 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S275JR | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S275JR | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S355J0 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S355J0 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S355J2 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S355J2 | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S355JR | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S355JR | FeSi/Al | | CC | CR | 50 | EN10025-2 |
| steel plates | S355K2 | FeSi/Al | | CC | N | 100 | EN10025-2 |
| steel plates | S355K2 | FeSi/Al | | CC | CR | 50 | EN10025-2 |

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