DNV·GL

Certificate No:
TAS000008B

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Brakes

with type designation(s)
SFB, sizes: 6.3-10-16-25-40-63-100-160-250-400-630-1000, SFB-H sizes: 6,3-10-16-25-40-63-100-160-250-400-630, SFB-SH sizes: 6,3-10-16-25-40-63-100-160-250-400-630-1000

Issued to
PINTSCH BAMAG Antriebs- und Verkehrstechnik GmbH
DINSLAKEN, Germany

is found to comply with
Standard for Certification No. 2.22 Lifting Appliances

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2017-06-30**.

Issued at **Høvik** on **2015-11-30**

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Antonio Sendin Alvarez**

Aldo Matteucci
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

The safety brakes are applied mechanically when the current is disconnected. This ensures that the brake operates in the event of a power failure. The SFB series are suitable for dynamic and static braking. A dust/water protection degree of IP67 is offered.

Capacities SFB brakes:

Size	Maximum brake torque in Nm	Size	Maximum brake torque in Nm
6.3	63	100	1 000
10	100	160	1 600
16	160	250	2 500
25	250	400	4 000
40	400	630	6 300
63	630	1 000	10 000

Capacities SFB-H brakes:

Size	Maximum brake torque in Nm	Size	Maximum brake torque in Nm
6.3	100	100	1 600
10	160	160	2 500
16	250	250	4 000
25	400	400	6 300
40	630		
63	1000		

Capacities SFB-SH brakes:

Size	Maximum brake torque in Nm	Size	Maximum brake torque in Nm
6.3	80	100	1 300
10	130	160	2 100
16	210	250	3 300
25	350	400	5 200
40	550	630	8 000
63	800	1000	13 000

Application/Limitation

1. The brakes are to be used in connection with electric motors for hoisting and pulling purpose.
2. If DNV GL Product Certificate is to be issued, each item is to be surveyed to the full satisfaction of the attending surveyor according to agreed procedures. The DNV GL Product Certificate is to be issued by the surveyor.
3. Product, material and test certificate is to accompany each product/delivery.
4. When the electromagnetic field is relieved, the spring pressure is to be applied to obtain the necessary brake torque, which is not to be less than 80% in excess of maximum torque on the brake caused by the loads being regarded as static loads. The brake capacity must be considered in conjunction with the current dynamic coefficient.
5. Test to be carried out of each product ensuring braking torque being obtained.

Type Approval documentation

Tests carried out

Tests as given in Prüfanweisung Bremse SFB 6,3-1000 (Sachnummer: 000 684 600-976) are to be carried out.

Marking of product

The brake is to be marked with the manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform a survey every second year and before expire date of this certificate to verify that the conditions for the type approval are complied with.

END OF CERTIFICATE