

This certificate replaces certificate number MAN1300057-1 issued 02 July 2013 at Manila which is hereby cancelled

Certificate no: **MAN 1300057-1/A1**
Page 1 of 1



Certificate for Propeller

Office

Manila

Manufacturer

NAKASHIMA PHILIPPINES, CORP.

Purchaser

Michigan Wheel Marine

Intended for

20metre Harbour Master vessel Gdynia

Date

02 July 2013

Work's order number

PRS Order No.:TM/298/13

Client

Purchaser's order number

N130585

First date of inspection

28 May 2013

Final date of inspection

22 June 2013

Particulars

Approved Plan number

MW13177A

Date of plan approval

31 May 2013

Plan approved at

PRS Gdansk

Remarks

Rule Requirements for Ice Class (is applicable)

Material

Grade Cu3

Trade Name

Number of Blades

5

Diameter

900 mm

Solid or built (CP if controllable pitch)

Solid

Finished weight

93.8 kgs.

Left or right hand

RH

Design moment of inertia dry, as stated by manufacturer (if available)

40 kg-cm-sec²

Results Of Tests Witnessed By The Surveyor

| Cast Identification Number | Tensile Tests | | | When Required | | Impact | | | |
|----------------------------|---------------------------------------|--|--------------------------|---------------------|------|--------|---|---|-----|
| | Tensile Strength N/mm ² | Yield or 0.2% proof stress, as applicable N/mm ² | Elongation on 5,65 √ So% | Reduction of Area % | T °C | 1 | 2 | 3 | Ave |
| A29=524 | 603.90 | 301.95 | 17.30 | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |

Chemical Composition And Heat Treatment As Stated By The Manufacturer

| Cu | Zn | Mn | Fe | Al | Sn | Ni | Pb | Si |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 80.20 | 0.41 | 0.91 | 4.56 | 8.98 | 0.03 | 4.73 | 0.03 | 0.13 |
| - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - |

Heat Treatment

Identification Marks

Identification number (including office contraction code)

MAN1300057/1

Propeller Number

GL41355

Blade Number

5

Initials and Date

22 June 2013

Location of identification marks

Boss

Remarks

Issued on behalf of Polski Rejestr Statkow S.A. (PRS)

Issued at

Manila

on

29 July 2013

Felicisimo L. Serato Jr.

Surveyor to Lloyd's Register Asia

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