

511812

KEY INFORMATION CAPABILITIES I P Huse AS



Revision History			
Rev	Date	Issue purpose	Revised by
17	06.06.24	Updated certificates, and machines	MAH
16	14.04.23	Updated certificates	MAH
15	21.03.23	Updated DNV Certificate valid to 2026, removed Tacchi	MAH
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11	21.09.20	Updated Certificate JQS	MAH
10	11.08.20	Updated Certificate of registration NCE	MAH
00	06.10.16	First issue	MNL

Revision: 17 Verified: MAH Page 1 of 35 Document number: 511812 Originator: MNL - 10.10.2016





IP Huse AS N-6487 Harøy www.iphuse.no iph@iphuse.no

LIST OF CONTENT

ı.		AREA / PERSONNEL / EQUIPMENT	
	1.1	Assembly workshop	3
	1.2	Welding workshop	4
	1.3	Cutting department	5
	1.4	Surface treatment	<i>6</i>
	1.5	Quay and quay crane	7
	1.6	Forklifts and hydraulic transport carriages	
	1.7	Personnel	
2.		ADVANCED MACHINE CENTRES	
	2.1	Gear cutting machines	
	2.2	Carnaghi vertical turning centre	
	2.3	Hankook vertical turning centre	
	2.4	Pama 3000 boring and milling machine	
	2.5	Pama 2000 boring and milling machine	
	2.6	Zayer milling machine	
	2.7	Free	•••••
	2.8	MAG G&L 1600 MC (to be updated)	16
	2.9	CNC Turning / Drilling / Milling center	
	2.10	Multitasking milling-turning machine	
•		WEI DING	
3.		WELDING F. J. CAR (00 11)	1.0
	3.1	Esab CAB 600 welding portal	
	3.2	Esab CAB 460 welding crane	
	3.3	Pema 35 000 robotic welding station	
	3.4	Pemamek automatic C&B station	
	3.5	Yaskawa welding robot	23
4.		CUTTING	
	4.1	Messer OmniMat L 6000	24
	4.2	Messer OmniMat L 6000 Plasma	25
5.		HARDENING / TEMPERING	
٥.	5.1	Induction hardening machine for gear wheels	26
	5.2	Induction hardening machine for pinions	
	5.3	Ipsen oven	
6.		SURFACE TREATMENT	
	6.1	Blastman	29
7.		ATTACHMENTS	
	7.1	DNV Business assurance management system certificate	30
	7.1.1	DNV Welding Workshop approval certificate	
	7.2	DNV ISO 14001	
	7.3	DNV ISO 45001	
	7.4	IP Huse video presentation www.ipl	

Document number: 511812

Revision: 17 Originator: MNL - 10.10.2016

Verified: MAH

Page 2 of 35







AREA/PERSONNEL/EQUIPMENT 1.

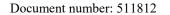
1.1 ASSEMBLY WORKSHOP



General	
Hall	Assembly
Size	$\approx 1000 \ m^2$
Capacity	
- Curpucity	
Width	22 m
Length	50 m
Height	20 m
Door	12 m

240 ton
7 x 1 ton
14 m
L6000 x W2500 x H2500

Return to list of content



Revision: 17

Originator: MNL - 10.10.2016

Verified: MAH

Page 3 of 35





1. Area/Personnel/Equipment

1.2 Welding workshop

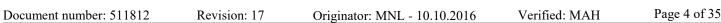


General	
Hall	Welding
Size	$\approx 1000 \ m^2$

Cranes		
Main crane	160 ton	
Beam cranes	6 x 1 ton	

Capacity		
Width	22 m	
Length	50 m	
Height	20 m	
Door	12 m	

Return to list of content









AREA/PERSONNEL/EQUIPMENT 1.

1.3 CUTTING DEPARTMENT

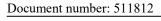


General		
Hall	Cutting	
Size	$\approx 600~\text{m}^2$	

Our cutting department can handle both heavy plates of coarse dimensions as well as smaller plates. With a cutting capacity up to 300 mm of thickness we can manufacture a wide range of components.

Capacity		
Width	16 m	
Length	40 m	
Height	10 m	
Door	9 m	

Return to list of content



Revision: 17

Originator: MNL - 10.10.2016

Verified: MAH

Page 5 of 35





1. Area/Personnel/Equipment

1.4 SURFACE TREATMENT



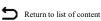
Sandblasting		
Hall	Surface treatment	
Size	$\approx 1240 \text{ m}^2$	

The surface treatment facilities are devided into five different halls with a combined area of approximatley 1240 m^2 . This includes office space and technical rooms.

Revision: 17

When producing equipment for the marine- and oilbusiness the surface treatment are of outmost importance. That is why IP Huse have invested a great amount of resorces in these disciplines.

Our department performs sandblasting, washing and painting. Needless to say, the facility are adapted to handle big components.





Document number: 511812

Verified: MAH Page 6 of 35

IP Huse AS N-6487 Harøv



AREA/PERSONNEL/EQUIPMENT 1.

1.5 Quay and Quay crane



Quay		
Regulations	ISPS ON/OFF	
Length	175 m	
Depth	7 m	
Heigth from water level	+3.05	
Max. vessel length	150 m	

Quay crane capacity		
135 ton	12.5 m	
65 ton	22 m	
20 ton	28 m	

Our location may, for some, seem to be at the very outskirts of Europe. We, however, perceive this to be the very basis of our success. Situated a short walk from the shores of the Atlantic Ocean and with a deepwater harbour on site, we have the world within our reach.

Revision: 17

Return to list of content



Document number: 511812

Verified: MAH

Page 7 of 35



1. Area/Personnel/Equipment

1.6 FORKLIFTS AND HYDRAULIC TRANSPORT CARRIAGES

Forklifts	
50 ton	SVE Truck
25 ton	SVE Truck

Hydraulic transport carriages		
450 ton	Hydraulic transport carriage	
250 ton	Hydraulic transport carriage	





When handling and producing heavy components, the internal transportation logistics are of severe significance. Thus we have invested in several high capacity forklifts and hydraulic carriages.

Our workshop enables these multiwheelsers to move and maneuver inside and in between the different departments. This makes for a secure and efficient production.

50 ton IP Huse number: 9.110.145.008 450 ton IP Huse number: 9.106.045.001 25 ton IP Huse number: 9.110.145.009 250 ton IP Huse number: 9.106.045.002

Revision: 17

Return to list of content



Document number: 511812

Verified: MAH



Page 8 of 35



AREA / PERSONNEL / EQUIPMENT 1.

1.7 Personnel



Capacity	
Engineering department	10
Machine workshop	26
Assembly workshop	18
Surface treatment	6
Welding workshop	30

With a well educated engineering department and experienced workshop personell we are ready to take on every challenge.

As history reveals, IP Huse AS as a company is able to develop and adapt according to market demands and across industry disciplines. A mechanical workshop with almost 100 years of traditions. Traditions to explore and revolutionize.



Return to list of content



Document number: 511812

Verified: MAH

Page 9 of 35

Revision: 17



2.1 GEAR CUTTING MACHINES



General	
Brand	SerWeMa
Model	ZFWZ 6300
Control	Siemens 840 D

Capacity	
Max. diameter (- tool diameter)	7113 mm
Max. height	1364 mm
Weight capacity	80 000 kg

Brand	Model	Max. diameter hobbing (-D tool)	Max. diameter sing- le tooth (-D tool)	Max. height	Max. weight
Kolomna	3TC	5475 mm	5474 mm	960 mm	
SerWeMa	Kolomna 3TC	4000 mm	5280 mm	1200 mm	
SerWeMa	ZFWZ 3150	3280 mm	3280 mm	1005 mm	30 000 kg
SerWeMa	ZFWZ 2000	2320 mm	2320 mm	1124 mm	15 000 kg

IP Huse number: 9.235.150.003

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 10 of 35







2.2 CARNAGHI VERTICAL TURNING CENTRE



General	
Brand	Carnaghi
Model	AC 52 TM 4800
Control	Siemens 840 D

Revision: 17

Capacity		
Table diameter	4800 mm	
Max. diameter	5200 mm	
Max. height	2500 mm	
Max. weight	80 000 kg	

IP Huse number: 9.240.150.001

Return to list of content



Document number: 511812

Verified: MAH

Page 11 of 35



2.3 HANKOOK VERTICAL TURNING CENTRE



General	
Brand	Hankook
Model	VTC 50 - 65
Control	Siemens 840 D

Revision: 17

Capacity	
Max. diameter	6500 mm
Max. height	3000 mm
Table diameter	5000 mm
Weight capacity	60 000 kg

IP Huse number: 9.240.150.003



Return to list of content



Document number: 511812

Verified: MAH

Page 12 of 35





2.4 PAMA BORING AND MILLING MACHINE



General	
Brand	Pama
Model	Speedram 3000
Control	Siemens 840 D

Table capacity	
Total area	3500 x 3000 mm
Loading capacity	60 000 kg
Wandering indexing table (V)	2000 mm

Working range	
Column longitudinal travel (X)	15 000 mm
Headstock vertical travel (Y)	5000 mm
Axial tavel of spindle ram (Z)	1400 mm
Boring spindle axial travel (W)	1200 mm
Total axial travel (W+Z)	2600 mm
Angle head	Yes

Floor plates	
Loading capacity	$15\ 000\ kg/m^2$

IP Huse number: 9.230.150.005

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 13 of 35







2.5 PAMA BORING AND MILLING MACHINE



General	
Brand	Pama
Model	Speedram 2000
Control	Siemens 840 D

Table capacity	
Total area	3000 x 3000 mm
Loading capacity	80 000 kg
Wandering indexing table (V)	1250 mm

Working range	
Column longitudinal travel (X)	8000 mm
Headstock vertical travel (Y)	4500 mm
Axial tavel of spindle ram (Z)	1200 mm
Boring spindle axial travel (W)	1000 mm
Total axial travel (W+Z)	2200 mm

Floor plates	
Loading capacity	15 000 kg/m ²

IP Huse number: 9.230.150.006

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 14 of 35







2.6 Zayer milling machine



General	
Brand	Zayer
Model	30 KMU 13000
Control	Siemens 840 D

Capacity	
Table LxW	13 000 x 1700 mm
Travel XxYxZ	11 400 x 1250 x 2000 mm
Weight capacity	20 000 kg
Horizontal indexing table	D = 800 mm
Vertical indexing table	D = 800 mm
Angle head	0.001°
Tool magazine	100 tools

IP Huse number: 9.230.142.003

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 15 of 35





IP HUSE AS - KEY INFORMATION CAPABILITIES



2. ADVANCED MACHINE CENTRES

 $2.8\,MAG\,G\&L\,1600\,MC\,\,\hbox{(to be updated)}$

General	
Brand	
Model	
Control	Siemens 840 D

Capacity	
Table LxW	
Travel X	
Travel Y	
Travel Z	
Travel spindel W	
Weight capacity	
Vertical table	
Angle head	
Tool magazine	

IP Huse number: 9.230.143.002

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 16 of 35







2.9 CNC TURNING/DRILLING/MILLING CENTRE



General	
Brand	Millturn
Model	WFL M120 / 5000
Control	Siemens 840 D

Revision: 17

IP Huse owns two of these Millturn machines: WFL M120 / 5000 and WFL M120 / 3000.

Capacity	
Maximum swing over bed	1160 mm
Distance between centers	5000 mm
Weight capacity between centers	8000 kg
Tool magazine	108 + 3
Effect main spindle	90 kW
Effect milling spindle	55 kW
Travel X	920 mm
Travel Y	650 mm
Travel Z	5330 mm

IP Huse number: 9.210.144.010

Return to list of content



Document number: 511812

Verified: MAH

Page 17 of 35



2.10 Multitasking milling-turning machine



General	
Brand	Soraluce
Model	FMT-4000
CNC control	Siemens 840 D SL

Precise milling and turning of large and complex components. The Soraluce FMT centre makes it possible to have both unit and serial productions.

Revision: 17

Capacity	
Table LxWxH	4500x1240x730 mm
Max weight	8000 kg
Spindle power	43 kW
Spindle speed range	4000 rpm
Tool magazine	40/60/80/100/120
Turning table diameter	1600 mm
Travel X	4000 mm
Travel Y	1600 mm
Travel Z	1300 mm

IP Huse number: 9.220.143.004

Return to list of content



Document number: 511812

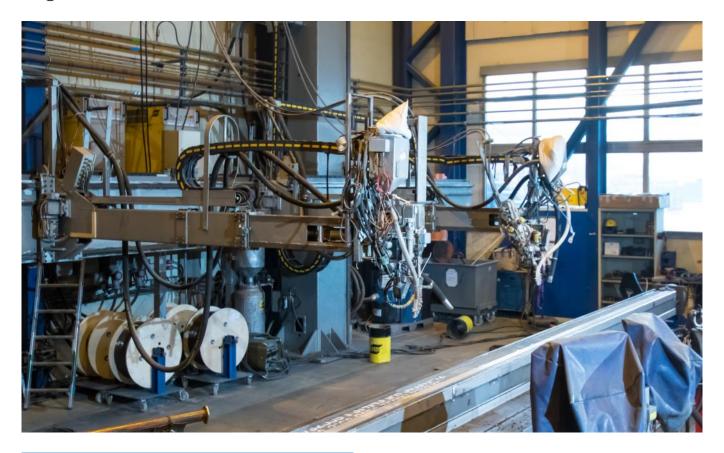
Verified: MAH

Page 18 of 35



3. WELDING

3.1 ESAB CAB 600 WELDING PORTAL



General	
Brand	Esab
Model	CAB 600
Control	PEK

Capacity	
Max. diameter	7000 mm
Max. length between nossels	12 000 mm
Max. load	160 ton (crane capacity)

Process

Twin sub arc welding on both nossels simultaneously.

Revision: 17

IP Huse number: 9.260.160.002



Verified: MAH Page 19 of 35



Document number: 511812







3. WELDING

3.2 ESAB CAB 460 WELDING CRANE



General	
Brand	Esab
Model	CAB 460
Control	PEK

Robot capacity	
Max. diameter (on table)	7000 mm
Boom height	6000 mm
Boom extension	3000 mm

Table capacity	
Weight capacity [0° tilt]	120 000 kg
Weight capacity [90° tilt]	30 000 kg
Table diameter	6500 mm
Max. tilt angle	90°

IP Huse number: 9.260.160.003

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 20 of 35







3. WELDING

3.3 Pema 35 000 Robotic welding station



General	
Brand	Pemamek
Model	35 000 FAS
Control	DX100

Robot	
Handling robot	Motoman MH50-20
Axis	6
Max. load	20 kg
Max. reach	3106 mm
Repeatability	$\pm 0.15 \text{ mm}$

Revision: 17

Table capacity	
Max. loading capacity	35 000 kg
Max. workpiece diameter	6000 mm
Axels	3
Travel X	1500 mm
Travel Y	1800 mm
Travel Z	3000 mm
Max. offcet from table surface	700 mm (at 35 000 kg)
Max. tilting angle	± 25°

IP Huse number: 9.260.160.040

Return to list of content



Document number: 511812

Originator: MNL - 10.10.2016

Verified: MAH

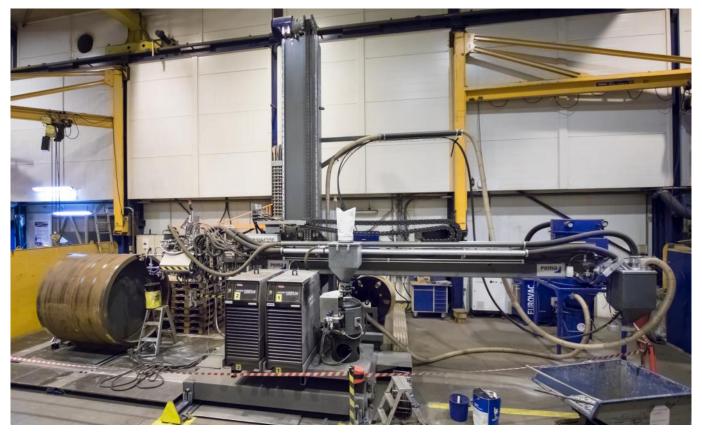
Page 21 of 35





3. WELDING

3.4 PEMAMEK AUTOMATIC C&B STATION



General	
Brand	Pemamek
Model	Automatic C&B 4x4 station
Control	Pema advanced HMI

Capacity	
	900 mm - outside
Min. diameter	1350 mm - longitudi- nal innside welding
Max. diameter	3700 mm
Min. length	900 mm
Max. length	3000 mm
Min. plate thickness in sections	40 mm **
Max. plate thickness in sections	80 mm **
Max. weight	15 000 kg

IP Huse number: 9.260.132.007

Return to list of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 22 of 35







3. WELDING

3.5 Yaskawa welding robot

General	
Brand	Yaskawa
Model	MH 50 II
Control	XRC and DX100

Robot capacity	
Railing length	13 000 mm
Axis	9

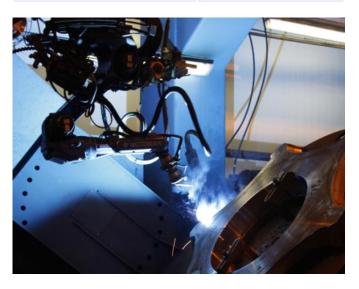


Table capacity	
Weight capacity	7500 kg
Axis	2

Revision: 17



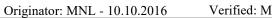
IP Huse number: 9.260.131.001



Return to list of content



Document number: 511812





Page 23 of 35







4. **CUTTING**

4.1 Messer OmniMat L 6000



General	
Brand	Messer
Model	OmniMat L
Control	Global controller

This is a CNC plate cutter with a steady and precise design, constructed for termal cutting methods (oxygen) with tree torch bevel cutting head.

Revision: 17

Capacity	
4500 mm	
12 000 mm	
300 mm	

IP Huse number: 9.255.133.005/002

Return to list of content



Document number: 511812

Verified: MAH

Page 24 of 35



4. Cutting

4.2 MESSER OMNIMAT L 6000, PLASMA



General	
Brand	Messer
Model	OmniMat L 6000
Control	Messer Global Control

This machine is used for plasma cutting and marking of steel plates with a high efficiency and accuracy owing to numerical control when cutting.

Revision: 17

Capacity	
Max. width	5000 mm
Max. length	9500 mm
Max. thickness	50 mm

For this purpose, this machine has been designed and manufactured placing emphasis on high speed, high accuracy, high reliability, high workability and others requierd for every NC cutting system.

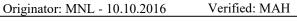
IP Huse number: 9.255.133.006

Return to list of content

Page 25 of 35



Document number: 511812







HARDENING / TEMPERING **5.**

5.1 Induction hardening machine for gear wheels



General	
Brand	EFD Induction
Model	1-1075
Control	Siemens 840 D

We can offer treatment of a wide range of gear wheel modules, as our induction coils are custom made for every different tooth profile.

Revision: 17

Capacity	
Max. diameter	6500 mm
Hardening temperature	950 °C
Max. hardening depth	7 mm

IP Huse number: 9.235.148.010

Return to list of content



Document number: 511812

Verified: MAH

Page 26 of 35





HARDENING / TEMPERING **5.**

5.2 Induction hardening machine for pinions



General	
Brand	EFD Induction
Model	1-0640
Control	Siemens 840 D

We can offer treatment of a wide range of gear wheel modules, as our induction coils are custom made for every different tooth profile.

Revision: 17

Capacity	
Max. diameter	900 mm
Hardening temperature	950 °C
Max. hardening depth	7 mm

This machine enables the process of tempering and hardening at the same time, as this machine is a dual table hardener.

IP Huse number: 9.235.148.001

Return to list of content



Document number: 511812

Verified: MAH

Page 27 of 35



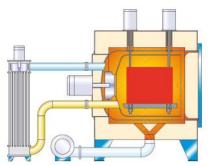
HARDENING / TEMPERING **5.**

5.3 IPSEN OVEN

General	
Brand	Ipsen
Model	VDR(N)-514-E
Control	PLC and Nitro-Prof 4

Capacity	
Temperature range	150 - 750 °C
Load dimensions (WxLxH)	610 x 910 x 610 mm
Weight capacity	800 kg

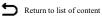
Treatments
Post-oxidation
Nitrating
Nitrocarburizing
Tempering
Annealing



Revision: 17



IP Huse number: 9.235.148.011







Document number: 511812





SURFACE TREATMENT

6.1 Blastman

General	
Brand	Blastman
Model	B20C
Control	Manual and Teach-in

Capacity (sandblasting of a cubical object)

Length	9500 mm
Width	7000 mm
Height	6000 mm

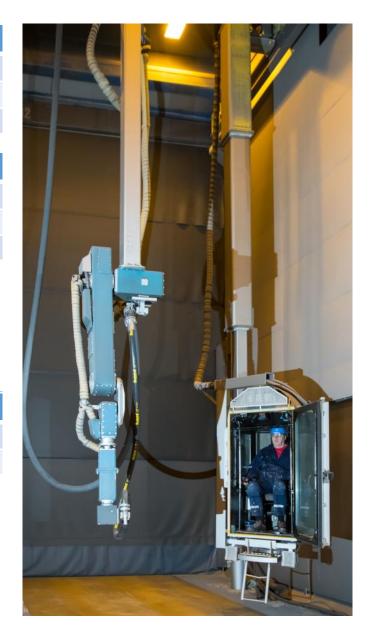
The sandblasting capacity wary from object to object according to the workpiece geometry.

Measurements listed above are the boundary values that allows the sandblaster to maneuver around the cubical object.

Railings	
Length	15 000 mm
Width	10 000 mm

Blastman B20C has an additional control cabin, which moves longitudinally with the robot. The cabin can be independently turned and moved vertically and across the blast room to cover every part of it. From the air-conditioned, dust- and sound-proof cabin, the operator has clear sight of the workpiece when programming the robot in teaching mode or when blast cleaning individual workpieces by manual control.

Revision: 17



IP Huse number: 9.125.182.040



Return to list of content



Document number: 511812

Verified: MAH

Page 29 of 35



MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 95995-2011-AQ-NOR-NA Initial certification date: 19 April 2011 Valid: 20 April 2023 – 19 April 2026

This is to certify that the management system of

I P Huse AS

Industrivegen 11, 6296 Harøy, Norway

has been found to conform to the Management System standards:

ISO 9001:2015/ ISO 3834-2:2021

This certificate is valid for the following scope:

Sales, design and manufacturing of winches, handling equipment and mechanical products for floating wind, offshore, marine, hydropower and other industry.

Place and date: Høvik, 16 March 2023



For the issuing office: DNV - Business Assurance Veritasveien 1, 1363 Høvik, Norway

Jøran Laukholm Management Representative

Verified: MAH



Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance Norway AS, Veritasveien 1, 1363 Høvik, Norway - TEL: +47 67 57 99 00. www.dnv.no/assurance

Revision: 17







Document number: 511812







WELDING WORKSHOP APPROVAL CERTIFICATE

Certificate No: WWA00001UM Revision No:

This is to certify:

That

I P Huse AS

Industrivegen 11 6487 Harøy, Norway

is approved for Welding

in accordance with

DNV rules for classification – Ships DNV class programme DNV-CP-0352 – Approval of manufacturers – Manufacture of welded products - Welding workshop

has been approved for the following range of applications
Hull Equipment
Machinery Components
Lifting Appliances

and the following particulars

Welding supervisor:

Marius Ionut Patrascu

Deputy welding supervisor:

Rune Finnoy

Issued at Hamburg on 2022-10-13

This Certificate is valid until 2025-04-15.

DNV local station: Mid-North Norway CMC

Approval Engineer: Gordon Stieb

for DNV



Digitally Signed By: Wildhagen, Christian Location: DNV Hamburg, Germany Signing Date: 13.10.2022, on behalf of

Thorsten Lohmann Head of Section

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Form code: WELD 201

Revision: 2021-03

www.dnv.com

Page 1 of 1

t of content

Document number: 511812 Revision: 17 Originator: MNL - 10.10.2016 Verified: MAH Page 31 of 35







MANAGEMENT SYSTEM **CERTIFICATE**

Certificate no.: C624083

Initial certification date: 15 February 2024

Valid: 15 February 2024 – 14 February 2027

This is to certify that the management system of

I P Huse AS

Industrivegen 11, 6296 Harøy, Norway

has been found to conform to the Environmental Management System standard:

ISO 14001:2015

This certificate is valid for the following scope:

Revision: 17

Sales, design and manufacturing of winches, handling equipment and mechanical products for floating wind, offshore, marine, hydropower and other industry.

Høvik, 15 February 2024



For the issuing office: **DNV - Business Assurance**

Jøran Laukholm Management Representative



Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid. ACCREDITED UNIT: DNV Business Assurance Norway AS, Veritasveien 1, 1363 Høvik, Norway - TEL: +47 67 57 99 00. www.dnv.no/assurance



Page 32 of 35



Document number: 511812







MANAGEMENT SYSTEM **CERTIFICATE**

Certificate no.: C624084

Initial certification date: 15 February 2024

15 February 2024 – 14 February 2027

This is to certify that the management system of

I P Huse AS

Industrivegen 11, 6296 Harøy, Norway

has been found to conform to the Occupational Health and Safety Management System standard:

ISO 45001:2018

This certificate is valid for the following scope:

Sales, design and manufacturing of winches, handling equipment and mechanical products for floating wind, offshore, marine, hydropower and other industry.

Place and date: Høvik, 15 February 2024



For the issuing office: DNV - Business Assurance Veritasveien 1, 1363 Høvik, Norway

Jøran Laukholm Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

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Return to list of content





