SIEMENS energy

Sensors

Installation, Operation Manual
00003816

Procedure for Packing, Preserving Handling and Shipping of Subsea Pressure and Temperature Sensors - Rev N

Revision List

Rev	Date	Description	Author	Reviewed	Approved
X1	30.08.07	Replaces doc no. 75.200.082	TKG	MÅS	TKG
0	10.09.07	AFC	TKG	JS	TKG
A	15.09.08	Changed logo and layout added table of content	KAA	VS	TKG
B	06.11.2008	Revidert – mindre endringer	S.M.M / H.A.M	H:A.M / J.I.N	S.M.M
C	08.02.2010	Section 9.5 added	AE	S.M.M	TKG
D	14.09.2012	Updated storage temp 7.1 and added text 9.1	CF	SM	Tkg
E	04.02.2013	Changed Logo	CS	MN	RM
F	05.04.2013	Added Connector protection cap	AE	SM	TKG
G	11.11.2013	Changed document name, corr reference in item 10.1, 9.4 ref corr, temp removed	CF	AE	TKG
H	09.02.2015	New layout	CF	MN	RHE
I	24.08.2016	Added section 5.4	AE	RE	VS
J	22.03.2017	Section 7. Added humidity information and high voltage warning. Section 9. Added high voltage warning.	AE	EV	BH
K	02.10.2019	Added section 5.5 – Humidity control	AE	JIF	EV
L	21.09.2020	Added section for large and single packed sensors + update logo	SKL	EV	AE
M	31.05.2021	Added picture to section 5.5	AE	EV	SKL
N	08.11.2021	Added picture to section 5.5	SLA	AE	EV

TABLE OF CONTENT

1 SCOPE

This procedure shall cover the packing, unpacking, preserving, handling and shipping activities for the Subsea Pressure and Temperature Sensors.

2 PURPOSE

The purpose of this procedures is to ensure proper performance of activities mentioned in item 1 above.

3 RESPONSIBILITY

Department Manager is responsible that the contents of this procedure are known to the personnel engaged in above mentioned activities and that the necessary documentation is accompanying the goods.

4 HEALTH AND SAFETY

Manual Handling, Lifting and Carrying are known to be the largest contributors to occupational ill-health. Ensure that mechanical handling aids are used whenever possible to avoid manual handling. Where manual handling is considered appropriate for the task safe lifting guidelines must be followed, e.g. adopt correct posture, consider team lifting, employ safe lifting technique, etc.

5 PACKING

5.1 For packing, Wooden Crates for up to 4 off or 2 off sensors shall be manufactured.

5.2 The design/production of the Wooden Crates shall be as shown in the sketch in Ch. 12 below. The inside of the crates will be filled with preformed padding.

5.3 The packing design and procedure shall ensure that the equipment is lying stable during transportation.

5.4 Sensors shall have the ring groove/probe plastic cover fitted before packing. Sensor probe ends shall not be less than 20mm from the packing box wall. This is to prevent damage from external box impacts and ease install and removal.

5.5 Unterminated sensors with MK-II, Autoclave/Butech or JIC adapter only:

In order to maintain low humidity and prevent moisture build up in the location of the glass to metal penetrator, a combination of silica gel and sealing tape shall be used. Before packing, one packet of silica gel is to be placed on top of the glass to metal penetrator before the MK-II adapter is installed (o-rings not used). Once the MK-II adapter is installed, sealing tape (tesa 50600 standard) shall be applied around the MK-II adapter over the hose exit hole and over the top of the fill screw.

Silica Gel placed on top of penetrator

MK-II adapter installed, and sealing tape applied

6 UNPACKING

CAUTION: ***THE SENSOR SHALL ONLY BE REMOVED FROM ITS PACKAGING BY PERSONNEL AUTHORISED BY THE CUSTOMER REFERRED TO IN THE PACKING LIST AND CONSIGNMENT NOTE!***

6.1. Ensure that the crates are positioned flat on the floor with the correct side uppermost.

6.2. Open the hard case lid, remove the insulation/padding holding the sensors.

6.3. Handle the sensors with care during operations.

7 STORAGE

7.1. Equipment shall be stored in a covered and dry area, humidity control is not required.

Storage temperature: -40 to +70°C.

7.2. The equipment should be stored in the hard case used for transportation.

7.3. The equipment is to be stored away from any vibration sources.

7.4. The equipment is to be stored away from high voltage sources.

8 CRITERIA FOR PRESERVATION

8.1 The Crates shall be labelled as follows:

ELECTRONIC EQUIPMENT
HANDLE WITH CARE
MADE IN NORWAY

8.2 The equipment shall not be stored in vibrating areas.

8.3 Forklift’s shall be used with care and only when strictly required.

8.4 All shock loads shall be avoided.

9 HANDLING

9.1 The Sensors are measuring instruments utilising very sensitive sensor elements.

CAUTION: ***HANDLE THE SENSORS WITH CARE THROUGH ALL ACTIVITIES, SUCH AS TERMINATION, HYP TEST ETC., UNTIL READY FOR FINAL ASSEMBLY.***

Note:
All sensors shall have installed, a protective cover for the ring gasket surface/probe and the electrical connector if applicable.
The sensors are also marked with a warning sign indicating that no mechanical object should be placed into the probe tip.

9.2 DO NOT DROP.

9.3 DO NOT expose the equipment to vibration and shock.

9.4 DO NOT expose the equipment to high voltage sources.

9.5 DO NOT expose the equipment to environment conditions beyond the storage specifications. ref. item 7 above, or the operational environment specification, if operational.

9.6 To assist with the lifting of heavier sensors, a suitable rated and certified soft fabric strop should be used in a double hitch (to prevent slippage) attachment just behind the flange. Before any lifting is carried out it is recommended that the probe and flange sealing areas are suitably protected.

10 SHIPPING AND MARKING

10.1 The sensors transmitter shall be shipped in the Wooden crates described in Ch. 5 and Ch.12.

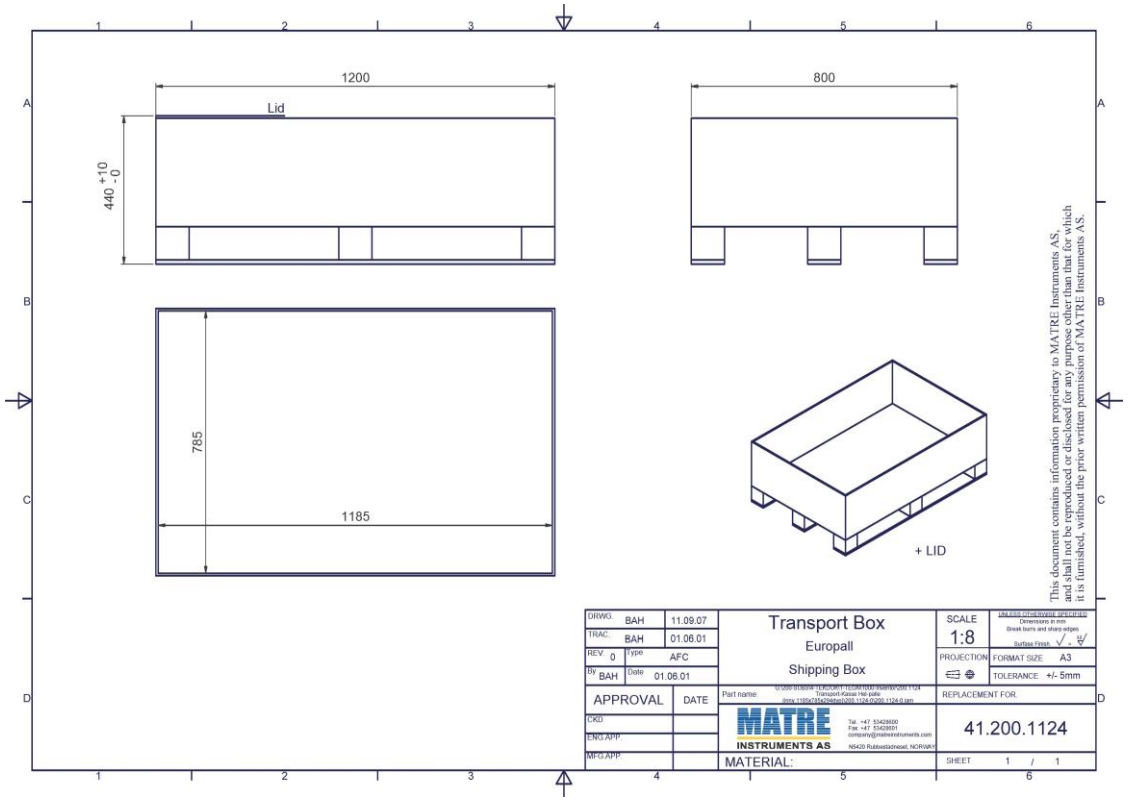
10.2 All markings shall be legible, permanent and un-obscured.

11 STACK LIMITATION

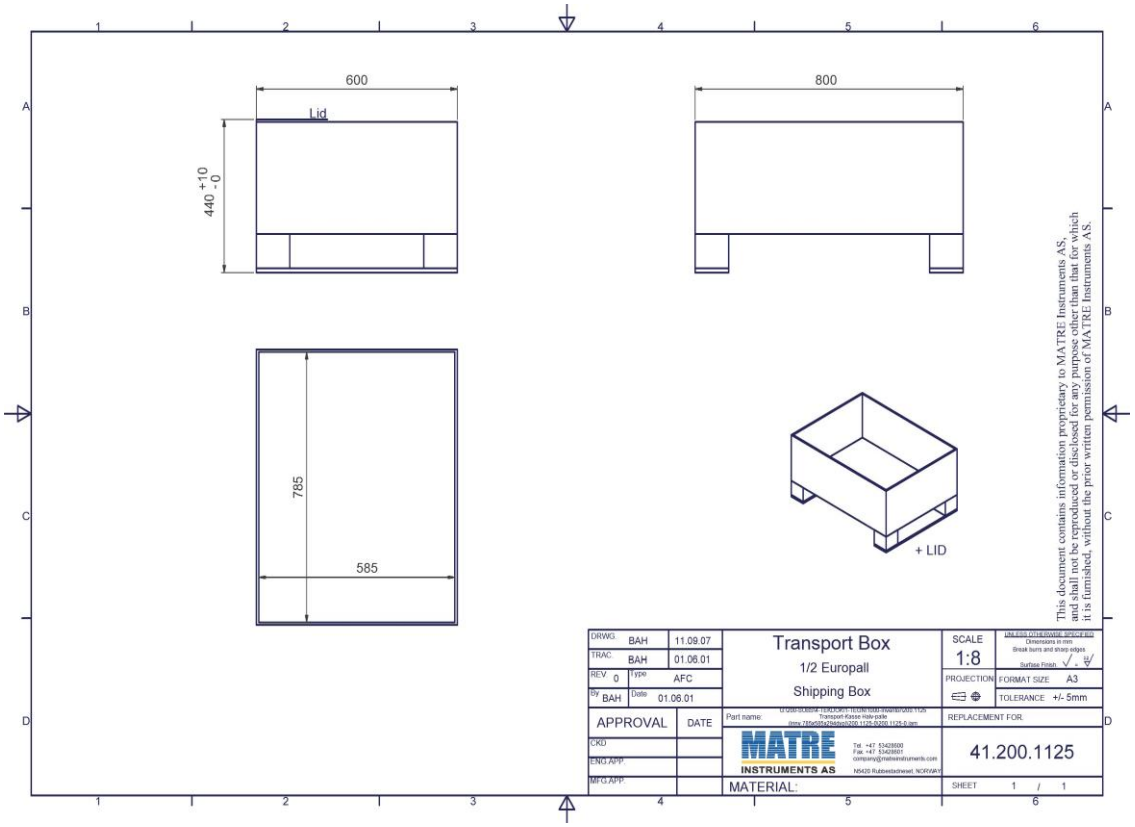
11.1 Crates with max. 6 off sensors: 2 CRATES MAX.
11.2 Crates with max. 3 off sensors: 3 CRATES MAX.
11.3 Crates with max. 1 off sensors: 2 CRATES MAX.

12 TRANSPORTATION CRATE

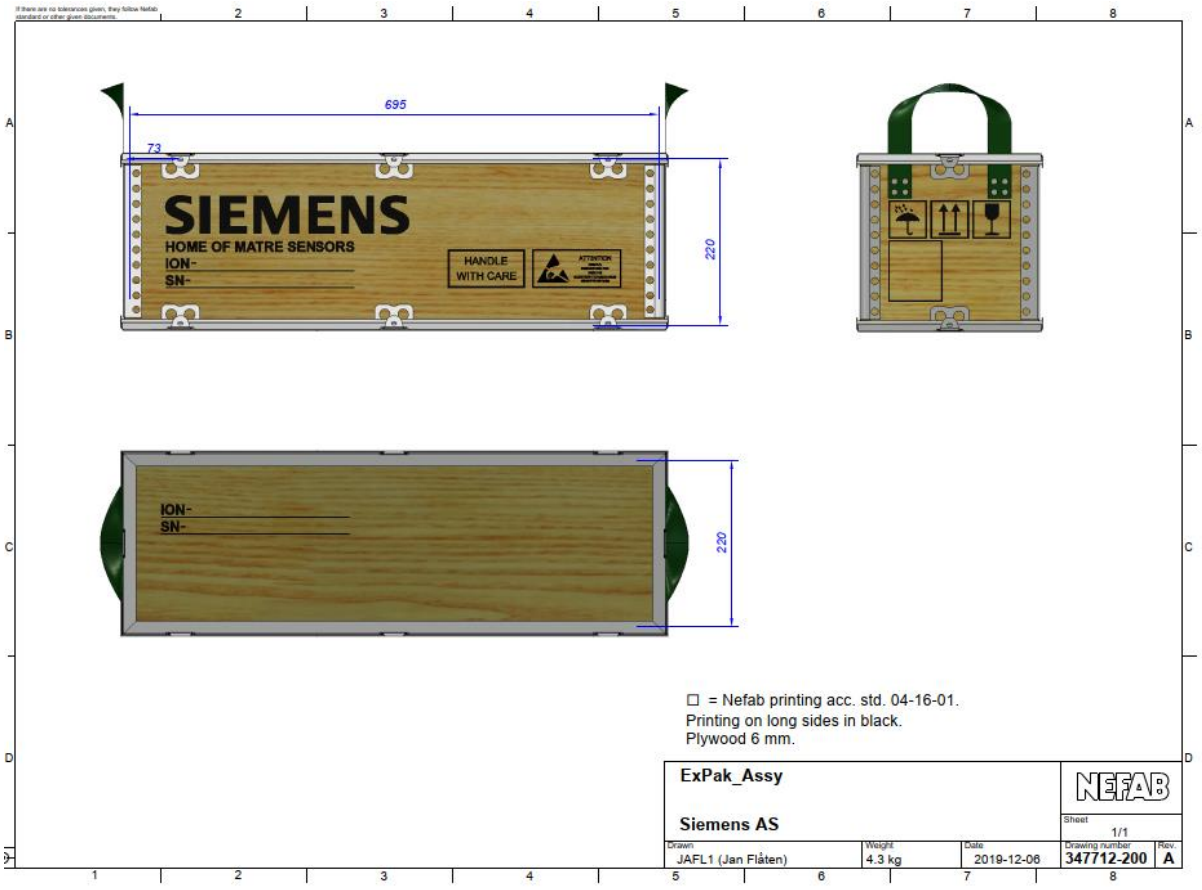
12.1 CRATE FOR MAXIMUM 6 OFF SENSORS



12.2 CRATE FOR MAXIMUM 3 OFF SENSORS



12.3 CRATE FOR SINGLE PACKED SENSORS



12.4 PACKING OF STANDARD SIZED SENSORS

Typical packing of 6 off sensors within the crate in 12.1

Typical packing of 3 off sensors within the crate in 12.2

12.5 WEPS-900 SENSORS

For sensors with irregularly large parts, a maximum of 3 sensors shall be packed in crate 12.1 and a maximum of 2 sensors shall be packed in crate 12.2. E.g. when flanges are larger than the moulded Styrofoam.

Typical packing of 3 off sensors within crate in 12.1

Typical packing of 2 off sensors within crate in 12.2

12.6 SINGLE PACKAGING FOR WEPS-100 and WEPS-300

When required, the WEPS-100 and WEPS-300 series shall be packed in single boxes, which are stacked in crate.

Typical packing of 1 off sensor within crate in 12.3

Stacking of single packed sensors in crate.