

# TYPE APPROVAL CERTIFICATE

## 형 식 승 인 증 서

Certificate No. : RTD23958-AC001 Initial Approval : 29th June, 2009.  
Product : Alarm, Monitoring and Control System  
Manufacturer : Praxis Automation Technology B.V.  
Willem Barentszstraat 1, 2315 TZ, Leiden, The Netherlands

Product Description : Ship Automation System ( Type : Maxi-Guard, Mega-Guard )

" See Appendix 1 & 2 "

Approval Condition : 1. Individual Product Certification is required.  
2. In case where this system is to be installed on board a ship,  
the system drawings are to be approved by this Society.

" See Appendix 2 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 28th June, 2014.  
Issued at Daejeon, Korea on 29th June, 2009.



Lee Woon-ho  
General Manager of  
Materials and Equipment Team

Note : 1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.

2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.

## Product Description and/or Approval Condition

Certificate No : RTD23958-AC001

Date of Issue : 29th June, 2009.

Product Description :

1. This system consists of the following items.

1) OWS – Operator Work Station (also named ‘All in one’ Work Station)  
for the following typical processes:

- Alarm/Control and Monitoring
- Pump- and Valve Control
- Duty Alarm System
- Patrol Alarm System
- Electrical Power Management
- Main Engine Control
- PID Control
- Graphic presentation of ship’ s data
- Dynamic Positioning

The OWS comprises the following components:

- Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
- TFT colour Graphic screen (type 98.6.02x.6xx)
- Operator Keyboard (type 93.6.02x.00x)
- Engineering Keyboard (type 76.0.200)
- Keyboard/Tracker ball (type 93.6.02x.x0x)
- Ethernet HUB/Router (type 76.0.81x)
- 6010 Fieldbus Driver Board (type 98.6.010.7x0)

2) EAS – Extension Alarm System for the remote alarm indication consisting of:

- Local Operator Panel (type 98.6.02x.6xx)
- 3 / 8 Channel LED Panel (type 93.0.31x)
- Fire Alarm Panel (type 98.6.021.60x)
- Watch Entrance Unit (type 93.0.359)
- Reset Box (type 93.0.351)
- Bedroom Buzzer (type 93.0.363)

3) PCU – Process Control Units Maxi-Guard/Mega-Guard DIN Rail Model (also called DPU or SAU)  
for processing of inputs, outputs, alarms and control loops, consisting of:

- Model 6030, 12 x Digital input / 8/12 x Digital output executed as Din rail model (Type 98.6.030.7xx).
- Model 6032, 24 x Digital Input unit executed as Din rail model (type 98.6.032.7xx).
- Model 6034, 16 x Analog input /mixed input output executed as Din rail model (type 98.6.034.7xx)
- Model 6049, Control Processor executed as Din rail model with redundant network interface executed as Din rail model (type 98.6.049.7xx).
- Display Panel (type 98.6.02x.6xx)
- Serial Interface Converter (type 91.6.040.40x)
- Sensor Supply Module (type 98.6.010.7xx)

4) BMS – Bridge Manoeuvring system (also called PCS) consisting of:

- All models mentioned under PCU
- Bridge/Control Room control Lever and Telegraph Panel (type 98.6.02x.62x)
- Emergency Stop DIN Module (type 98.6.034.7xx)
- Bridge/Engine Room Telegraph Panel (type 98.6.02x.6xx)
- Electronic Drive Unit (type 98.6.010.7xx)
- Electronic Actuator (type 98.0.3xx)
- 7” TFT Operator Panel (type 98.6.02x.6xx)
- BMS Indication Panel (type 98.6.02x.64x)
- BMS Indication Module (type 98.6.034.7xx)

< To be continued >

## Appendix 2

# Product Description and/or Approval Condition

Certificate No : RTD23958-AC001

Date of Issue : 29th June, 2009.

- 5) AHS – Anti Heeling System comprising of:
  - Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
  - TFT colour Graphic screen (type 98.6.02x.6xx)
  - Operator Keyboard (type 93.6.02x.00x)
  - Keyboard/Tracker ball (93.6.02x.x0x)
  - All models under PCU
  
- 6) PMS – Power Management System consisting of:
  - All models mentioned under PCU
  - PMS input/output Din module (type 98.6.034.7xx)
  - Local Operator Panel (type 98.6.02x.6xx)
  - 7" TFT Operator Panel (type 98.6.02x.6xx)
  - Display and Operating module (type 98.6.02x.6xx)
  - ※ Overload trip, Reverse Power Trip, Low-/High Frequency Trip/ Low-/High Voltage Trip, Standby Start, Synchronising, Preferential Trip, Load Sharing, Low Load Stop, Manual Start/Stop, Safety System
  - ※ Application software version 1.x (up to 3 DG' s), version 2.x (up to 5 DG' s)
  
- 7) BNWAS – Bridge Navigational Warning & Alarm System comprising of:
  - Local Operator Panel (type 98.6.02x.6xx)
  
- 8) DP – Dynamic Positioning system comprising of:
  - Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
  - TFT colour Graphic screen (type 98.6.02x.6xx)
  - Operator Keyboard (type 93.6.02x.00x)
  - Keyboard/Tracker ball (93.6.02x.x0x)
  - All models under PCU
  - 7" TFT Operator Panel (type 98.6.02x.6xx)
  - Joystick and Rate Of Turn Panel (type 98.6.02x.6xx)
  
- 9) UPS – Uninterruptible Power Supply comprising of :
  - 230VAC Series UPS
  - 24VDC Series UPS

### Approval Conditions :

3. This approval is granted on the basis of the following documents.

- 1) Environmental Test report
  - 1 Mega-Guard-Type approval augustus 2006 Rev 1.0.doc (30-Jan-2008, Rev. :1.0)
  - 2 Mega-Guard-Type approval 2008\_2 Rev 1.0.doc (28-Jan-2008, Rev. :1.0)
  - 3 Mega-Guard-Type approval 2008\_3 Rev 1.0.doc (30-Jan-2008, Rev. :1.0)
  - 4 Mega-Guard-Type approval 2008\_4 Rev 1.1.doc (30-Jan-2008, Rev. :1.1)
  - 5 Mega-Guard-Type approval 2008\_5 Rev 1.0.doc (30-Jan-2008, Rev. :1.0)
  
- 2) Software Revision List\_Rev1.21

< End of page >