



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA19562M

This is to certify that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer:	Protea Limited
Place of Manufacturing:	Unit2, Venture Park, Stirling Way, Peterborough PE3 8YD, UK
Product description:	Continuous Emission Monitoring Process Analyzer (Infra-Red)
Model:	P2000
Approval No.:	19A036
Valid until:	3 October 2024

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 4 October 2019.

T. Shimada
General Manager
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

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Attached sheet -1/2 to the Certificate No. TA19562M

Specification & documents:

1. Accessories: In situ heater / Heated bypass / Control and display unit

Particulars: Power Supply :115V/230V
Allowable temperature range :-25°C~+55°C
Frequency :50Hz/60Hz

2. Components and reference drawings:

PD-080v1_Instrument Overview P2000
Equipment Inventory 05/02/18
P2000 Datasheet
P2000 Design & Software Schedule V10 revised 24/04/2018
Protea Coding Standards
ISO 9001 Certificate

3. Documentation and Test Reports:

IACS E10 IEC60945 Test Report Test File No. TL1342

- To be continued -

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Attached sheet -2/2 to the Certificate No.TA19562M

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature $70^{\circ}\text{C} \pm 2^{\circ}\text{C} \times 16$ hours)		X
Damp heat test		X
Vibration test (Acceleration $\pm 0.7\text{g} \times 1.5$ hours)		X
Inclination test		X
Cold test (Temperature $-25^{\circ}\text{C} \pm 2^{\circ}\text{C} \times 2$ hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

2. Approved condition:

- (1) The product is not allowed to be installed in the bridge.
- (2) In case that the product is installed on open deck, a suitable enclosure is required to prevent the deterioration or corrosion by salt damage.

- The End -