



TYPE APPROVAL CERTIFICATE

형식 승인증서

Certificate No. : INC15142-AE003 **Initial Approval** : 30th June, 2009.
Product : Gas Detector
Manufacturer : GASTRON Co., Ltd.
#75-10, Palgok 2-dong, Sangnok-gu, Ansan-si, Gyeonggi-do, Korea

Product Description : Model : GTD-2000Ex

- Measuring Type	: Diffusion Type
- Display	: Local Digital LCD Display
- Safe Construction	: Ex d IIC T5
- Measuring Gas	: Flammable vapours
- Measuring Method	: Catalytic Cell, Thermal Conductivity Cell, Heated-semiconductor Cell

" See Appendix 1 "

Approval Condition : 1) This approval is granted on the basis of the test report nos. K2741/E07(TUV NORD), N0568(Sira), R51A16417C(Sira), Sira 08ATEX1003(Sira)
2) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.
3) Individual Product Certification is not required.

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 & Pt.7, Ch.1/5/6 of the Rules for Classification, Steel Ships.

This Certificate is valid until 29th June, 2014.

Issued at Daejeon, Korea on 30th June, 2009.



국 선 급
KOREAN REGISTER OF SHIPPING


(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.

Appendix 1

Product Description and/or Approval Condition

Certificate No : INC15142-AE003

Date of Issue : 30th June, 2009.

1. Product Description :

- 1) Gas Detector (Model : GTD-2000Ex)
- Measuring Type : Diffusion Type
 - Display : Local Digital LCD Display
 - Safe Construction : Ex d IIC T5
 - Measuring Method : Catalytic Cell,
Thermal Conductivity Cell,
Heated-semiconductor Cell
 - Measuring Range : 0 ~ 100% LEL
 - Response Time : 90% of Reading in less than 15 secs
 - Accuracy : within $\pm 3\%$ / Full Scale
 - Design Temperature : $-20 \sim +60^{\circ}\text{C}$
 - Design Humidity : 5 ~ 99% RH (Non-condensing)
 - Measuring Signal : 4 ~ 20mA DC/Full Scale
 - Signal Cable : CVVS or CVVSB 1.5 SQ x 3 Wires + Shield
 - Power supply : DC 18 ~ 31V
 - Conduit Pipe : 1/2" or 3/4" PF. PT. NPT
 - Drawing No. : G-Ex0046~0048, G-Ex0001~Ex0005, G-Ex0085,
G-Ex0007, G-Ex0015~Ex0019, C-000104, C-000105

2) Measuring Gas

- Flammable vapours in Annex 7B-1 of the Guidance, 2009.

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