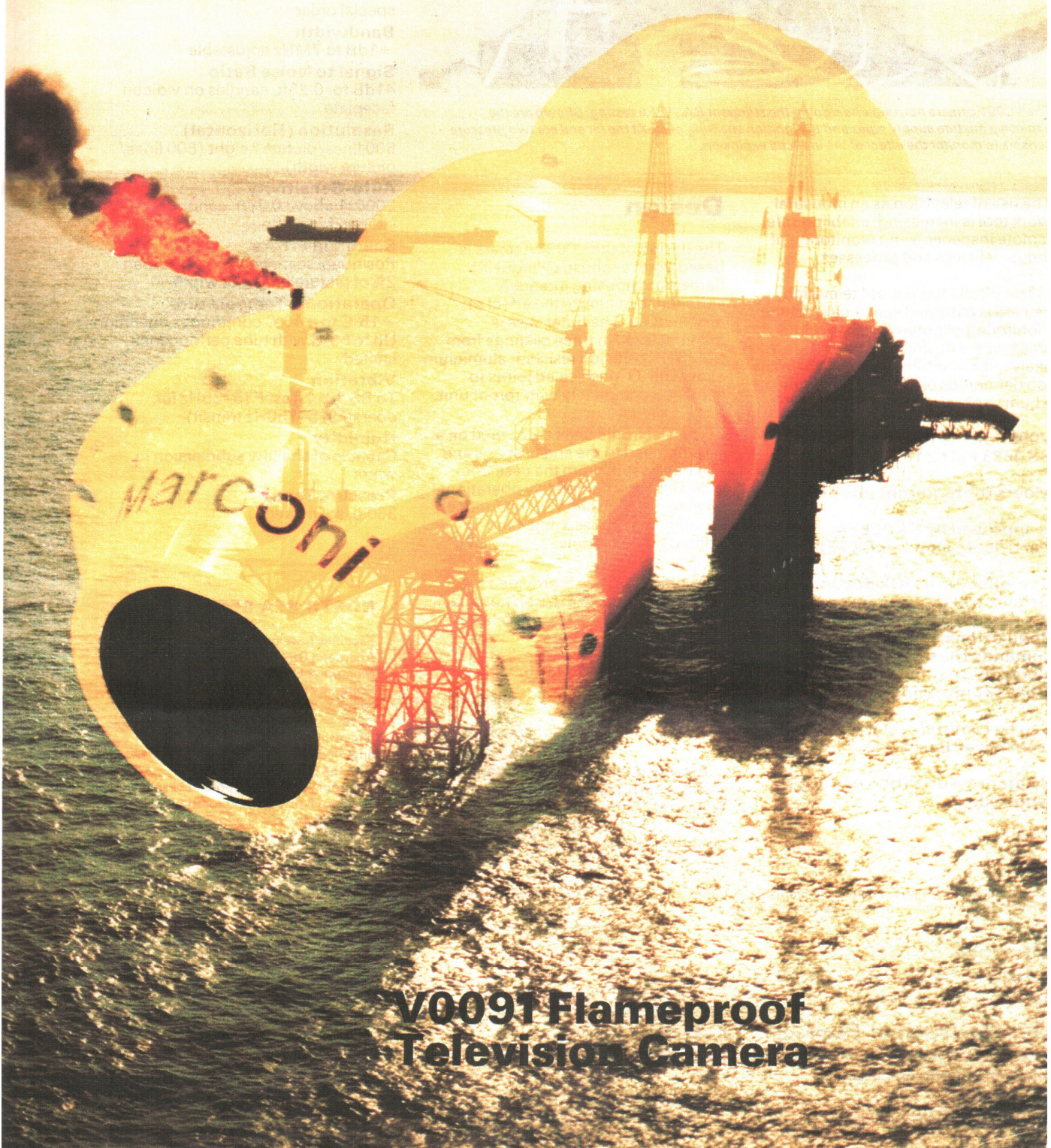
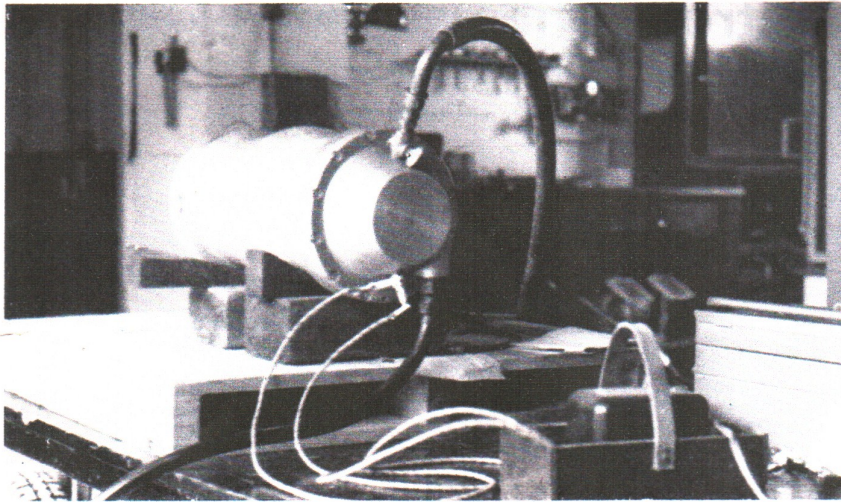


**MARCONI
ELLIOTT
AVIONICS**

**Electro-Optical
Products Division**



**V0091 Flameproof
Television Camera**



The V0091 camera housing undergoing the stringent BASEEFA testing. Shown are the explosive mixture supply pipes and the ignition sparking plug. At the far end are two pressure sensors to monitor the effect of the induced explosion.

The use of television as an industrial work tool is increasing, enabling safe remote inspection and monitoring of industrial areas and processes.

The V0091 flameproof television camera is designed specifically for the monitoring of potentially hazardous areas where explosive mixtures are likely to be encountered and where it is too dangerous or inconvenient to send a human observer.

V0091 meets the requirements of BS 4683 Part 2 1971 Group IIB

Meets the requirements of IEC 79/1

Is approved by BASEEFA, Certificate Number EX 76191

Complies with DOE document Offshore Installations (Construction and Survey) Regulations. Clause 3 of which demands the use of only approved electronic equipment in hazardous areas (Zones 1 and 2).

Can be remotely operated away from hazardous areas.

No air pressurization or purging required.

Design

The design of the V0091 camera is based upon a robust, cylindrical flameproof housing integrally stiffened to minimize the effect of mishandling. The outer case is manufactured in three castings from LM25TF corrosion resistant aluminium alloy with 'O' ring sealed joints to achieve a completely waterproof unit.

The electronic units are carried on a tray attached to the end castings and can be removed from the case from either end as a completely operational camera. Each discrete circuit function is contained on a separate plug-in printed board module.

Additional space is provided to accommodate two extra operational modules for special features chosen from:

- Auto gain
- Aperture correction
- Gamma correction
- Alpha-numeric identification

Extended temperature runs and testing during production predict a failure rate better than 8000 hours. Camera tube life, which is variable, is not included in the MTBF figure.

TECHNICAL SPECIFICATION

Dimensions

275mm dia x 665mm long

Weight

29kg (64lb) nominal

Power Consumption

25VA max 115/240V 50/60Hz

Vision Outputs

Two outputs 1 or 1.5V composite 0.7 or 1V Non-composite

Scanning Standards

625/50 or 525/60 other standards to special order

Bandwidth

±1dB to 7MHz adjustable

Signal to Noise Ratio

41dB for 0.25ft. candles on vidicon faceplate

Resolution (Horizontal)

600 lines/picture height (800 lines/picture width)

Auto-Sensitivity

2000:1 above 0.25ft. candles on vidicon faceplate

Scanning Errors

Positional scanning errors less than 2% of picture height or width

Operational Temperature

-15°C to +40°C continuous operation
Up to 55°C with tube performance limited

Vibration

To BS 2011 Test F (5-35Hz for operation 5-150Hz transit)

Humidity

Capable of shallow submersion in water

Pressure Test

360lb/sq in gauge

NORTH SEA SERVICE

Facilities have been established at the Aberdeen Oil Service Depot of The Marconi International Marine Company for servicing the V0091 camera.

The office is staffed by competent qualified personnel fully conversant with the problems of servicing electronic equipment both at base and on board North Sea exploration rigs, platforms and installations.

As we are always seeking to improve our products, the information in this document gives only general indications of product capacity, performance and suitability, none of which shall form part of any contract.

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