CONTINUOUS GAS WEIGHT MONITORING SYSTEM:
A comprehensive approach to monitor weight of fire extinguishing agent

Introduction
Continuous Gas Weight Monitoring System is used in Gas based Fire Extinguishing system like CO₂, FE-13, FM-200, Inert System, NAF S-III System, FE-227 System to monitor weight of the agent in the cylinder to meet NFPA & OISD standard.

Necessity of the System
As per the OISD standards 142 1996 (Ref. Clause 7.2.2), Fixed Carbon dioxide Fire Extinguishing system. e. Refilling:
Loss in weight of cylinders shall be checked once in 3 months. Refilling should be done if loss in weight is more than 10%.

As per NFPA-12, quantity of gas should be checked at least once in 6 months.

Advantage of the System
Fire extinguishing efficiency depends on the correct design concentration of extinguishing gas. If the gas loss due to leakage or any other reason, cylinder has to be refilled for designed quantity. It is very obvious, continuous monitoring of the gas weight is required.

This requirement is simply fulfilled by Continuous Gas Weight Monitoring System.

Without this system, once in 3 months / 6 months each cylinder is to be removed from the cylinder bank and weight is to be measured. After measuring the weight, again cylinders are to be re fixed and re commissioned for proper function.

This is time-consuming process for maintenance department with highly skilled manpower.

System Description
The system consists of

1. Continuous Gas Weight Monitor Electronic LED Type (Model No. CGWM-E) - Part No.IH007

2. Continuous Gas Weight Monitor Control Panel (Model No. CGWM-CP) - Part No.IH009

Working Principle
Each cylinder requires one Gas weight Monitor. The cylinder should be fixed in hanging condition through

Gas Weight Monitor. When the weight of the gas is reduced below 10% or 5% (according to the requirement of standard and type of gas system - For CO₂ gas 10%, and FM200/ NAF SIII gas 5%), the Low weight is indicated, by means of LED indication.

Gas weight monitor Control Panel provides required supply for weight monitoring unit. This panel also supervises the wire connection for open and short condition. On receipt of Low weight Indication from the cylinder bank; the panel gives Audio and Visual Indication. 2 set of potential free NO and NC contacts are available for remote indication or any other relevant signaling.

The panel works on 230 V AC or 24 V DC from Fire alarm panel. Maximum 20 Nos. of gas weight monitor can be connected with the Control Panel.
CONTINUOUS GAS WEIGHT MONITOR:
MODEL No.:CGWM-E, PART No.: IH007

General
Continuous Gas Weight Monitor is used in gas based fixed fire extinguishing system like CO₂, FE-13, FM 200, Inert Systems, NAF SIII, FE 227 to monitor weight of the agent in the cylinder to meet the NFPA requirement.

Features
- LED indication for low weight of agent.
- Cylinder ring matches the standard thread of cylinder neck.
- For non-standard threads, suitable ring will be provided.
- Hanger rod of standard length is used with ring to hang the cylinder.
- Low weight indication can be calibrated at the site if required.
- Device is powered directly by two wires from Continuous Gas Weight Monitor control panel model no. CGWM-CP.
- Plug in type simple connection from one device to another.
- One device is required for each cylinder.
- 24V Signal supply is derived from control unit. No current consumption by Gas Weight Monitor during normal condition. While low weight indication is ON maximum current consumption will be 10mA.

CONTINUOUS GAS WEIGHT MONITOR CONTROL PANEL:
MODEL No.:CGWM-CP, PART No.: IH009

General
Continuous Gas Weight Monitor Control Panel supervise and indicate the status of gas weight monitors, which are holding the gas cylinders, used in gas based fire suppression/extinguishing system.

Features
- Input supply voltage available in 24V DC / 230VAC / 110VAC, 50Hz
- Operating voltage 24V DC.
- Lamp test, acknowledge and reset control switches.
- System ON Green LED, Low weight orange LED, open and short Yellow LED.
- Inbuilt fault buzzer of continuous tone.
- Two wire style B wiring is provided to connect gas weight monitor.
- Control Panel provides only common low weight indication per zone. [Individual low weight indication is available on gas weight monitor].
- This is single zone control panel.
- Inbuilt low weight indication buzzer (intermediate tone).
- Supervision facility for open and short of connecting cable of gas weight monitor.
- Maximum gas weight monitor per unit restricted to 20 nos.
- Provision of one set of low weight fault repeating potential free NO and NC contact of rating 6 amp at 24V DC.
- Wall mounting type suitable for indoor application.
- Multi zones control panel are available.

Approval
- All the devices are available with BVQI/Lloyds Inspection.

OTHER MODELS

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Continuous Gas Weight Monitor—Mechanical Counter Weight Type with explosion proof limit switch Model No.CGWM-M.ex
AGNI CONTROLS is promoted by Mr. D. Balachandran – Mechanical Graduate Engineer at Chennai, Southern part of India and in Fire Protection field from 1985.

**Other Systems and Components – bala-wa™:**

- CO₂ Fire Extinguishing System & Components.
- Water Mist System.
- Conventional Fire Alarm System.
- Diversion / Spark Detection System & Components.
- Intrinsically Safe Fire Protection System & Components.
- Engineering Service.

**Our company is supported with:**

- R&D and Design Division
- Manufacturing and Inspection Division
- Supervision & Commissioning Division

**Design Codes / Standards Followed:**

- CO₂ Flooding System - IS 6382 / NFPA 12
- Water Mist System - NFPA 750
- Inert Gas Clean Agent System - NFPA 2001
- Installation of Sprinkler System - NFPA 13
- Water Spray Fixed System - NFPA 15
- Recommended Practice for Fire Protection for Electric Generating Plant - NFPA 850