

## INDIAN INSTITUTE OF TECHNOLOGY BOMBAY MATERIALS MANAGEMENT DIVISION

Powai, Mumbai 400076.

## PR No. 1000034715 (Rfx No. 6100001490) **Detailed Technical Specifications for Portable Type Detector**

GAS LINE INSTALLATION FOR 10 NOS. CYLINDERS TO 7 NOS. POINT OF USAGE FOR FURTHER CONNECTION OF DIFFERENT EQUIPMENTS. ALSO 3 NOS. VENT LINES FROM EACH MACHINE TO THE GLOVE BOX TO BE CONNECTED.

GASES: H2 /CH4 / N2 / HE / AR / AIR / CO / CO2 / C3H6 / 5% H2 in He

REQUIRED GAS DETECTORS BOTH PORTABLE AND FIXED TYPE TO BE SUPPLIED. FIXED TYPE DETECTORS TO BE INSTALLED AS PER THE REQUIREMENT. ALL THE DETECTORS TO BE CONNECTED TO CONTROL PANEL AND IN CASE OF LEAKAGE HOOTER SHOULD GET ACTIVATED. THE PANEL SHOULD HAVE RESET FEATURE AS WELL. LABORATORY LAYOUT WITH EQUIPMENTS ATTACHED

## WILL COMPRISE OF THE FOLLOWING

- CYLINDER TO BE CONNECTED WITH THE USAGE OF INDIVIDUAL SS316 BLOCK, VALVE AS PER IS:3224 AND BRAIDED HOSE – 10 NOS
- CYLINDER SHOULD BE KEPT WITH CYLINDER BRACKET / FRAME WITH BELT/ CHAIN ARRANGEMENT FOR 10 NOS. CYLINDERS – 1 NO.
- SS 316 REGULATOR WITH DUAL STAGE PRESSURE REDUCTION TO BE USED FOR EACH GAS CYLINDER 10 NOS.
- EACH GAS CYLINDER SHOULD BE CONNECTED TO PURIFIER WITH OXYGEN / MOISTURE / HYDROCARBON TRAPPER AS PER THE GAS SPECIFICATIONS AND REQUIREMENT - 10 NOS
- GAS LINE SHOULD BE SEAMLESS SS316 HAVING OD OF 0.25 INCH 700 MTRS
- GAS LINE SHOULD BE CONNECTED TO 7 DIFFERENT LOCATIONS
- EVERY USAGE POINT SHOULD BE ISOLATED WITH BALL VALVE AND SUITABLE FOR CONNECTION OF 1/4" OD SS TUBE • - 70 NOS
- SS 316 HIGH PRESSURE REGULATOR FOR OUTPUT PRESSURE UP TO 140 KG/CM2 TO BE SUPPLIED 4 NOS
- SUPPORT SYSTEM, INSTALLATION USING ALUMINIUM PROFILE, PU CLAMP TO BE USED 1 NO.
- LEAK TESTING OF THE ENTIRE LINE TO BE COMPLETED FOR 1.5 TIMES OF THE USAGE PRESSURE 1 NO
- ENTIRE INSTALLATION SHOULD BE ASTHETICALLY APPEALING AND COMPLETED USING REQUIRED SUPPORT SYSTEM

Description	Qty (No.)
CYLINDER TO BE CONNECTED WITH THE USAGE OF INDIVIDUAL SS316 BLOCK, VALVE AS PER IS:3224	
AND BRAIDED HOSE	10
CYLINDER TO BE KEPT WITH CYLINDER BRACKET / FRAME WITH BELT/ CHAIN ARRANGEMENT FOR 10	
NOS. CYLINDERS	1
SS 316 REGULATOR WITH DUAL STAGE PRESSURE REDUCTION SHOULD BE USED FOR EACH GAS	
CYLINDER ALONG WITH ISOLATION VALVE FOR PURIFIER	10
SS 316 TUBE 0.25 INCH (600-700 MTR)	700
SS 316 TEE 0.25 INCH	70
SS 316 UNION 0.25 INCH	120
SS 316 BALL VALVE	70
PURIFIER - OXYGEN AND MOISTURE TRAPPER	10
PROFILE WITH T NUT AND SCREW FOR SS TUBE CLAMP	500
SUPPORT SYSTEM, INSTALLATION AND TESTING	1
SS 316 HIGH PRESSURE REGULATOR WITH PISTON ARRANGEMENT AND 2 NOS. SS PRESSURE	4
GAUGES. INLET PRESSURE: UP TO 200 KG/CM2, OUTLET PRESSURE: UP TO 100 KG/CM2	

## GAS DETECTOR DETAILS

Description	Qty (No.)
Portable type detector for measuring LEL (Flammable), O2, H2S, CO. Make: Honeywell or substantially equivalent	1
Portable type detector for measuring Ammonia Make: Honeywell or substantially equivalent	1
Fixed type detector for measuring 100% LEL. Make: Honeywell or substantially equivalent	1
Fixed type detector for measuring Oxygen. Make: Honeywell or substantially equivalent	1
Fixed type detector for measuring Carbon monoxide gas. Make: Honeywell or substantially equivalent	1
Fixed type detector for measuring Hydrogen Sulphide gas. Make: Honeywell or substantially equivalent	1
Fixed type detector for measuring Ammonia gas. Make: Honeywell or substantially equivalent	1
Control panel for Fixed type detector along with Hooter	1