

- EX. HYDROGEN
- EX. HELIUM
- EX. OXYGEN
- EX. NITROGEN
- EX. ARGON / HELIUM MIX
- EX. ARGON
- EX. CARBON MONOXIDE
- EX. CARBON DIOXIDE
- EX. METHANE
- EX. L.P.G.
- NEW HYDROGEN FOR MeOH Reactor / PCT Pro / Charge / Discharge Demo
- NEW HYDROGEN / CO2 MIX FOR MeOH Reactor
- NEW N2 FOR MeOH Reactor
- NEW MIXTURE FOR PCT Pro / Charge / Discharge Demo
- NEW EMERGENCY GLOBE TYPE ISOLATING VALVE
- NEW FLASHBACK ARRESTOR FOR HYDROGEN
- NEW SOLENOID VALVE
- NEW THREE PORT CONTROL VALVE
- GAS DETECTOR
- PANIC BUTTON
- GAS ALARM PANEL

- NOTES:
- THE LATEST AMENDMENTS OF THE FOLLOWING SHALL BE COMPLIED WITH:
- THE STANDARD REGULATIONS FOR WIRING OF PREMISES ISSUED BY THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS.
  - MACHINERY AND OCCUPATIONAL SAFETY ACT NO. 85 OF 1993 AS AMENDED.
  - SANS 10087: PART 1, 2, 3, 7 OF 2000 LATEST AMENDMENT.
  - SANS 10260: PART 1, 2, 3, 4 OF 2000 LATEST AMENDMENT.
  - ALL PIPEWORK SHALL BE COLOUR CODED ACCORDING TO SANS 10140-3 OF 2010.
  - WARNING NOTICES SHALL BE POSITIONED ADJACENT TO THE VALVES CLEARLY AND PROMINENTLY STATING THAT THE VALVES SHALL NOT BE CLOSED BY UNAUTHORISED PERSONS.
  - PRESSURE GAUGES SHALL BE OF THE BOURDON DIAL TYPE.
  - ALL TESTING OPERATIONS SHALL BE WITNESSED BY THE ENGINEER.
  - NEW GASBANK IS TO BE FURNISHED WITH 1 x 9 KG DCP FIRE EXTINGUISHERS IN A LOCKABLE CABINET WITH BREAK GLASS.
  - ALL GAS PIPES SHALL BE SLEEVED WHERE PIPES PASS THROUGH WALLS AND SLABS, AND SEALED WITH SUITABLE FLUE GAUZE.
  - ALL RELEVANT SAFETY SIGNS MUST BE MOUNTED AT THE GASBANK. NO NAKED FLAME, NO SMOKING FLAMMABLE AND DANGER.
  - DUE TO THE HIGH LINE PRESSURES INVOLVED ONLY SUITABLE QUALIFIED GAS CONTRACTORS FOR HIGH PRESSURES MAY PERFORM THE LABORATORY GAS INSTALLATION.

NOTES:

HYDROGEN; HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE 2X1 MANUAL CHANGE OVER MANIFOLDS WITH MULTISTAGE REGULATORS AND WORKING PRESSURE OF 200 BAR AND GAS PURITY N5.0

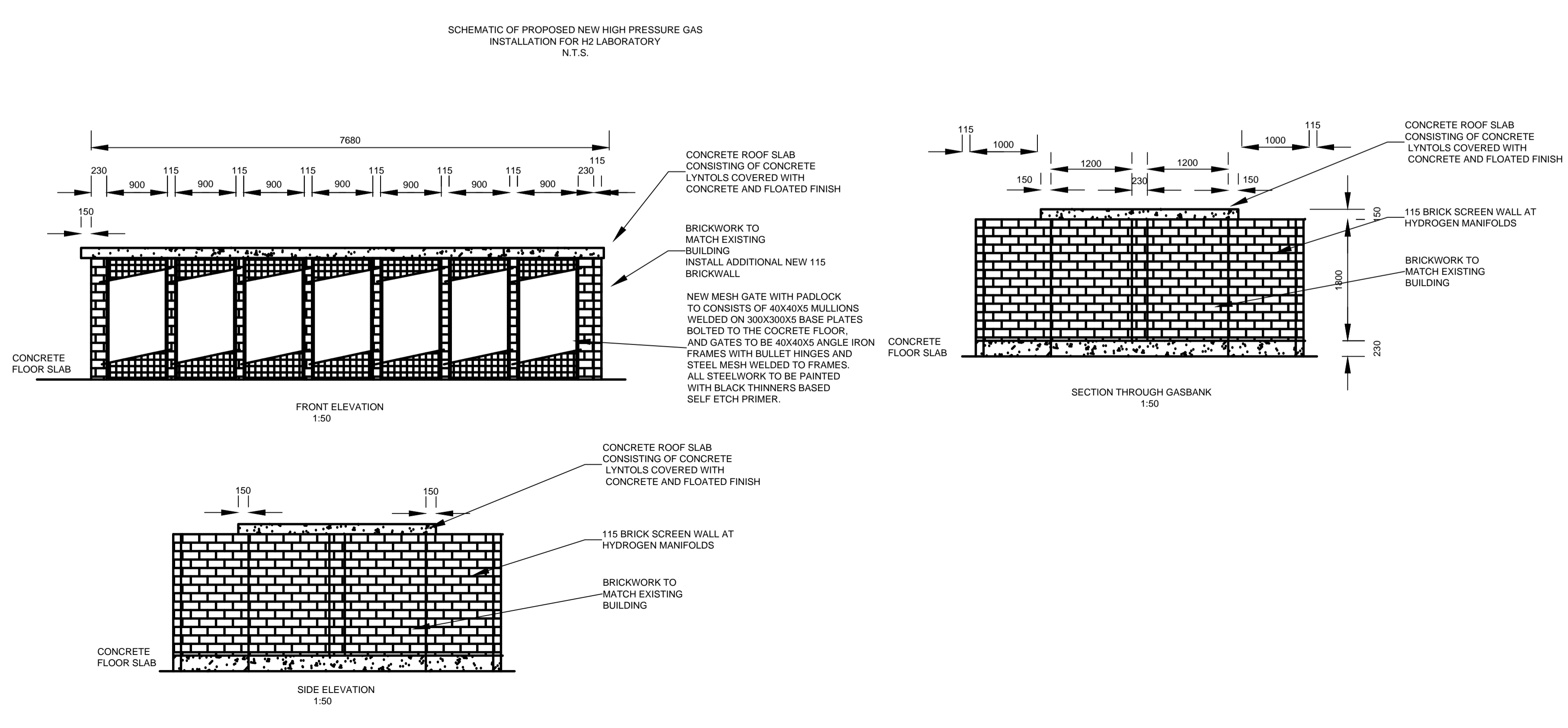
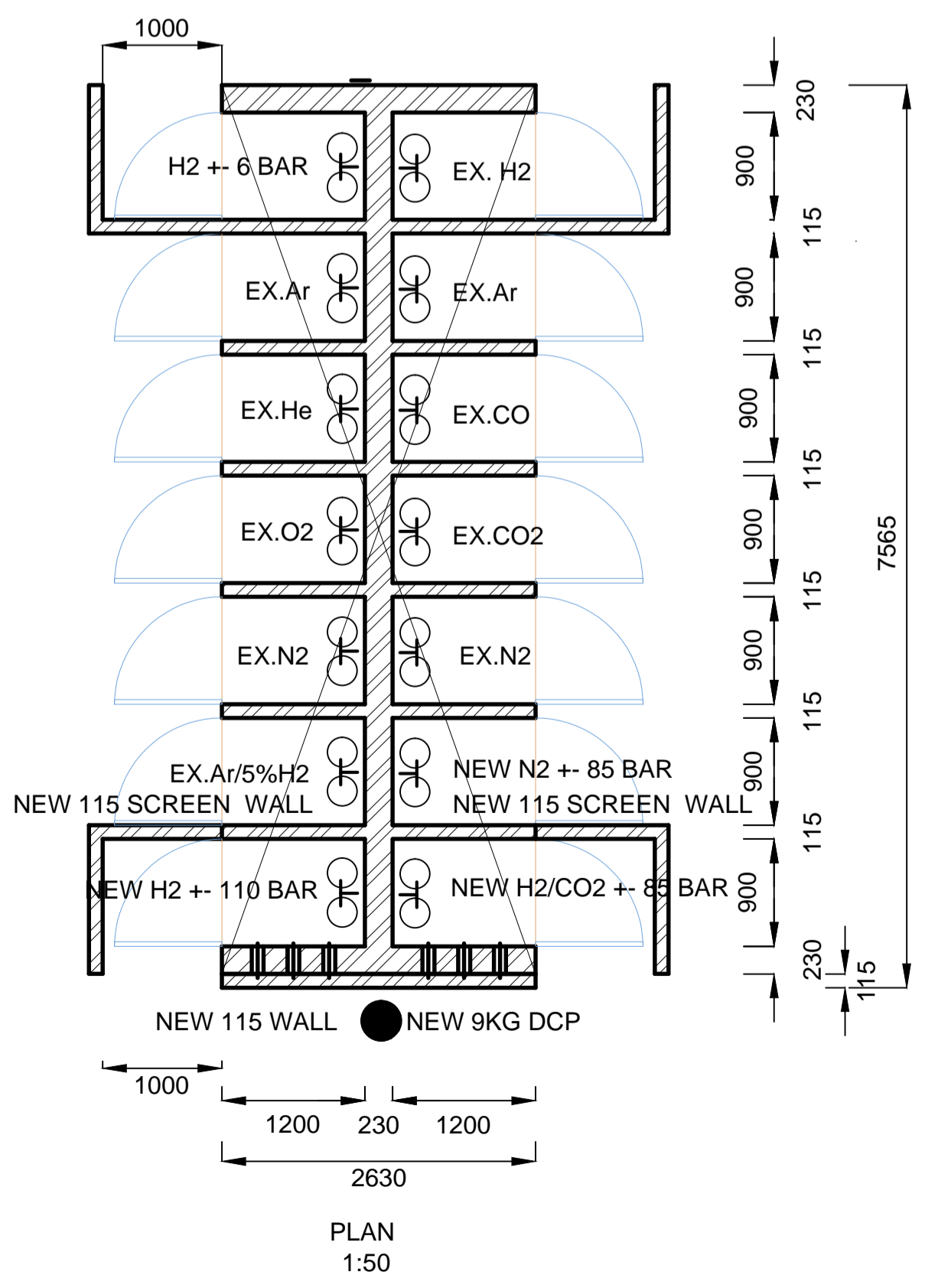
HYDROGEN; HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE END OF USE MULTISTAGE REGULATORS COMPLETE WITH CONTACT GAUGE AND GLOBE TYPE ISOLATING VALVE AND GAS PURITY N5.0 AND SUITABLE FOR 200 BAR WORKING PRESSURE

HYDROGEN; HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE NORMALLY CLOSED SOLENOID VALVES, INTRINSIC SAFE; SPARK PROOF; FLAME PROOF CONNECTED TO THE PANIC BUTTON, ALARM PANEL AND GAS DETECTOR AND SUITABLE FOR 200 BAR WORKING PRESSURE AND GAS PURITY OF N5.0

HYDROGEN AS WELL AS HYDROGEN / CARBON DIOXIDE TO HAVE FLASHBACK ARRESTOR SUITABLE FOR WORKING PRESSURE OF 200 BAR AND GAS PURITY OF N5.0

ALL PIPEWORK TO BE 316L SCHED. 40 STAINLESS STEEL FOR A WORKING PRESSURE OF MINIMUM 200 BAR.

NONE FLAMMABLE GASES: 191.91 KG  
FLAMMABLE GASES: 2.22 KG



REV.	DESCRIPTION	BY	DATE

CLIENT/PROJECT  
C.S.I.R. BRUMMERIA, PRETORIA

TITLE  
PROPOSED LABORATORY GAS INSTALLATION FOR H<sub>2</sub>/SA AT BUILDING NO.15  
NEW GASBANK DETAILS  
NEW HIGH PRESSURE GAS INSTALLATION SCHEMATIC

SCALE -	AS SHOWN	NAME	DATE	REF. No.
DRAWN	-	-	12-02-2020	-
CHECKED	-	-	12-02-2020	-
APPROVED	-	-	12-02-2020	-

DRAWING No. 01/02/2020-MG-03