Materialspecifikation Steam system

								2004-01-08	Dwg: S3-1249			
								OR 203220				
Item No S-MAN	Dim.	PN	Dwg	Description	Manufact	Type No.	Remark	T=Thread W=Weld F= Flange	Cert.	Supplier: S-Man(S) Yard	GN supply	
SS 001			1	Oil detection device	Mobrey	MCU201, 230/115V	Sensor: 442SD80	T		S		
SS 002	50	10	1	Sight glass		DIN28120		W		S		
SS 003	50	10	1	Sight glass		DIN28121		W		S		
SS 004	65		1	Level alarm	ERAB-Mobre	ERAB 430 / ENK 40	3 level points, blindflange	F		S		
SS 005	25	16	1	Self acting temperaure controller	Clorius	25G1FB PN25/KS4/V410	Range 30-90 C	F		S		
SS 006	32		1	Salinometer	Uni-Safe	SL6000W	Electrode	T		S		
SS 007	20	16	1	Magnetic level indicator				F		S		
SS 008				Feed water test kit		Duroval, type A				S		
SS 009	80	16	1	Quick Closing	LK Valves		SWRB	F		S		
SS 010	80	16	1	Quick Closing	LK Valves		SWRB	F		S		

	YARDIMCI 233220	203200										
	LIST OF EQUIPMENT FOR ALARMS IN STEAM GENERATOR											
NO.	ALARM	SENSOR TYPE	RANGE	SENSOR MAKER	TYPE OF OUT SIGNAL	SENSOR INTENT	ADJUSTMENT POINT FOR INITIATING	TYPE CABLE	AREA CABLE			
	boiler 1											
1	steam high pressure	rt 5	4-17 bar	danfoss	digit	alarm/switching off	11,5 bar	N07V-K	1			
2	steam pressure - burner limit	rt 5	4-17 bar	danfoss	digit	burner stand-by	10 bar	07G9-K(450/750V	1,5			
3	steam pressure - regulation	rt 5	4-17 bar	danfoss	digit	regulation	8,5 bar	07G9-K(450/750V	1,5			
4	low water level	probe	10-10000 S/cm	mmt 200	digit	alarm/switching off	factory	N07V-K	1			
5	low water level	probe	10-10000 S/cm	mmt 200	digit	alarm/switching off	factory	N07V-K	1			
6	high water level	probe	10-10000 S/cm	mmt 201	digit	alarm/switching off	factory	N07V-K	1			
7	igh combustion air temperature				digit	alarm/switching off		N07G9-K(450/750V	1,5			
8	low combustion air pressure	lgw 10 a2	1-10mA	dungs	digit	alarm/switching off	3 mbar	07G9-K(450/750V	1,5			
9	feeding pump 1 motor overload	lrd 10	4-6 A	telemecanique	digit	protection/alarm	5,7A	HF-PC 0,6/1 KV	2,5			
10	feeding pump 2 motor overload	lrd 10	4-6 A	telemecanique	digit	protection/alarm	5,7 A	HF-PC 0,6/1 KV	2,5			
11	exhaust gas temperature	probe	0-600°C	gefran	digit	alarm/switching off	300°C	N07V-K	1			
12	steam pressure	mbs 3000	0-16 bar	danfoss	analog	remote	0-12 bar	SCH 1002	2x1 + sch			
13	water pump control	probe	10-10000 S/cm	mmt 201	digit	alarm/switching off	factory	N07V-K	1			

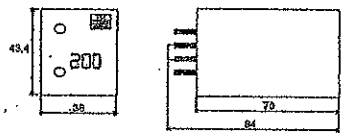
CONDUCTIVITY LEVEL SWITCH M.M.T. SERIES 200-201
INSTRUCTION MANUAL

1- Description

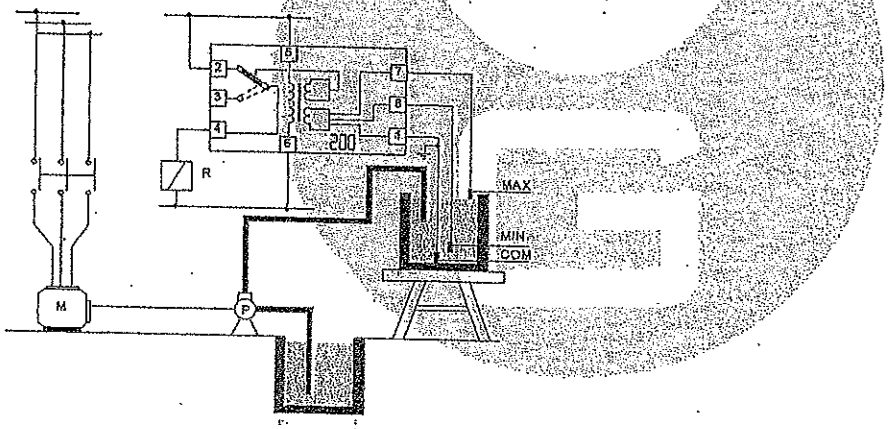
200 and 201 series are level switches for conductive liquids, with integral conductivity between 0.3 and 10000µS. according to the model. They cannot be used with oily materials, neither insulating, or inflammable liquids. Working temperature must be between – 5 and + 40 °C. For the level measurement, we recommend the use of our series 395 probes.

2- Technical characteristics

- dimensions are millimeters:



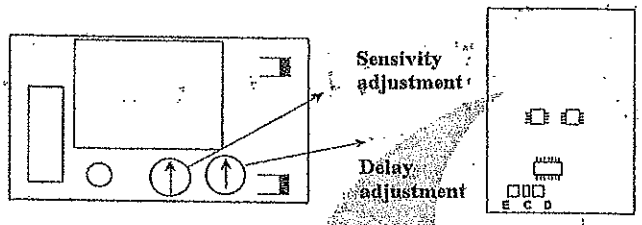
- 2 front led lamps
- no electrolysis phenomena
- i N.O. contact switch 5 A/220V a.c. resistive load
- sensitivity and time delay (only 201) adjustment
- operation:



Water supply: the pump stops when water level exceeds MAX; and starts when water level drops below MIN.
Drainage: in the drawing above, move the wire connected to terminal # 2 to terminal # 3. the pumps starts when water level exceeds MAX , and stops when water level drops below MIN.

3- Installation and use

- before to power the device, be sure that the power supply voltage is equal to the value indicated on the labels of the device, between – 10% and + 5%
- use only sockets made according security regulations
- be sure to ground terminal # 1.
- with correct supply the front green lamp must be always on; the front red lamp is on when the internal relay is on, in presence of water between the electrodes
- the wiring to the 395 probes can be make using unshielded cable, with copper section higher than 1 mmq.
- electrodes must be separate: a separator is available on request.
- do not connect to the internal relay a load higher than 5 A (resistive load) voltage higher than 220V a.c. 50/60 Hz
- sensitivity and time delay (201 only) adjustment:



- The standard switches are factory set to 30 µS integral sensitivity, using the internal trimmer: sensitivity increased by clockwise rotation (for switches with power supply by counter clockwise rotation)
- Only 201 series switches are factory set to 5'' time delay, using the internal trimmer: time delay increases between 0.5'' to 12'', by clockwise rotation. According to the model, the delay is factory set to ON or to OFF, simply making a short circuit between a central pad situaded on the printed circuit board, and the pad labeled F or D respectively.

B.2 Level

B.2.1 Level indicators:

High pressure NG -n. steel reflex gauges

Each indicator communicates with the generator through two cut-off cocks; a third bleed valve is mounted at the lower and of the indicator itself.

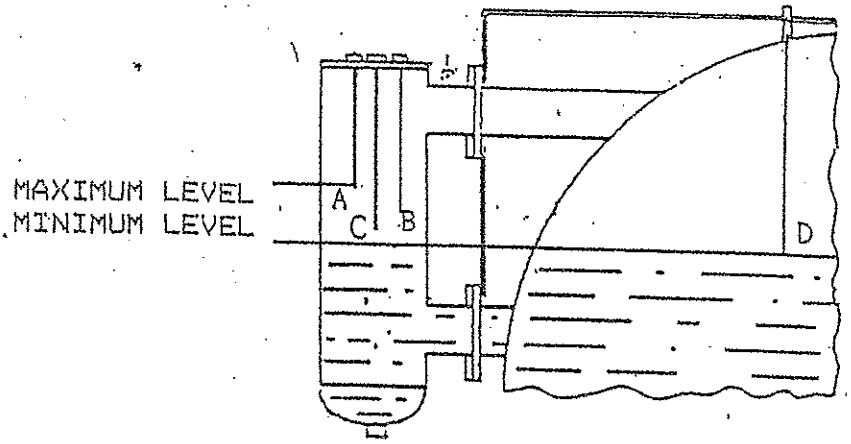
These cocks are required in order to be able to check the efficiency of the level indicators at intervals, as follows:

open the bleed cock foe a few seconds and then close it again. If the water disappears and then returns quickly to the previous level with large oscillations, the gauge can be considered in good working order. If, on the other hand, the water returns slowly to the previous level or halts at a different level, this means communication with the boiler is obstructed.

In order to detect which of two routes is obstructed in order to try a bleed it, close the steam cock, leaving the water cock open and then open the bleed cock: water should emerge. The water escaping from the bleed cock, given its flow rate, will carry with it any sludge deposits formed in the ducts.

Close the water cock and open the steam cock: steam should emerge from the bleed cock. Closing the bleed cock and leaving the water and steam cocks open, the water should return to its previous level. If this does not take place, the connecting ducts linking the level indicator to the generator need cleaning.

B.2.2 Automatic level regulator: this is an electrical conduction type with electronic relays located in the electrical control panel. Function covers water pump start-stop and low level safety system (see FIG.B6).



- probe A — pump stop GESTRA NRG-S 16-2
- probe B — pump start GESTRA NRG-S 16-2
- probe C — 1st burner cut-out safety device and alarm ON GESTRA NRG-S 16-2
- probe D — 2nd burner cut-out safety device and alarm ON GESTRA NRG-S 16-11

N.B. : it is recommended to install not only alarm bell in the boiler room but also a sound or visual alarm in a frequently occupied room.

B.3 Supplies:

Water supplies for the Garioni Naval S.r.l. steam generators are covered by:
A centrifugal motor-driven pump for delivery and head to the generator

Low pressure generators be connected directly to the mains water supply

B.3.1 Motor – driven pump
In view of the low-level operating features of the low pressure generators, pumps with single impellers are fitted.

High pressure boilers, on the other hand, are fitted with multistage pumps. These pump consist of a set of impellers which the water progressively passes through, thus increasing pressure.
The pump must not exert any intake action on the intake opening, but should rather be " under head", that is under the pressure of a column of water resulting from the difference in height between the water in the collection tank and pump itself.