TITLE

TEST INSTRUCTIONS FOR MAIN STEAM PRESSURE WITH MOTOR SET LIMITER CIRCUIT 1L1-B002 (Assembly Drawing 117D6686 G1)
FIRST MADE FOR EHC MARK II (LOAD CONTROL UNIT)

cancels test 118D1377 PCR3

REVISIONS

1 | O.N. MAR 2 0 1973

2 | O.N. JAN 2 8 1975

I. SCOPE

This instruction outlines the test specifications for circuit board 1L1-B002 (Ref. Drawing 117D6686) (Schematic 115D2239)

II. CIRCUIT DESCRIPTION

The purpose of the Main Steam Pressure with Limiter, Circuit board 1L1-B002 is to impose operating limits upon the flow reference signal of the controlling valve set, when necessary to protect the turbine from abnormal initial steam conditions.

This circuit interfaces with Rosemont Pressure Transducer Model 1101-7-2 and has a proportional pressure limiter, with ten per cent pressure regulation, and takes it's cut-in pressure reference point from a motor driven potentiometer.

The Rosemont Transducer provides a current proportional to main steam pressure and this circuit converts it to a voltage. The adjustable gain Pressure Amplifier stage also cancels the off set bias in the transducer output, by summing the electrical signal with an opposing adjustable bias. An amplified voltage, proportional to main steam pressure, is thereby produced.

The Pressure Amplifier output drives one voltage comparator and a voltage follower type operational amplifier called the Meter Amplifier.

Another Operational Amplifier designated the Limiter Amplifier, sums the Pressure Amplifier Output Signal, an adjustable valve opening bias and a reference bias, set with an external motor driven potentiometer, which represents the cut-in pressure level for pressure limiting.

The Limiter Amplifier incorporates a power stage and network for establishing an adjustable floor limit. The output of the Limiter Amplifier power stage drives a voltage comparator and is gated in a low value gate with the load limit signal of the load limit and load set runback circuit and with the controlling valve amplifier output signal.

Board 1L1-B002 is designed to drive either two, three or four valve position units whose individual input impedance is 20 K ohms.

III. CIRCUIT SPECIFICATIONS

ACTIVE FOR Test
BY Jam DATE 4-3-96

A. Power Supply Requirements

1. Power Supply 1: +22.000 ± 0.002 VDC (Pin 37) at 300 MA

ET-273
273-2
273-12
273-13
273-11
PRINTS TO