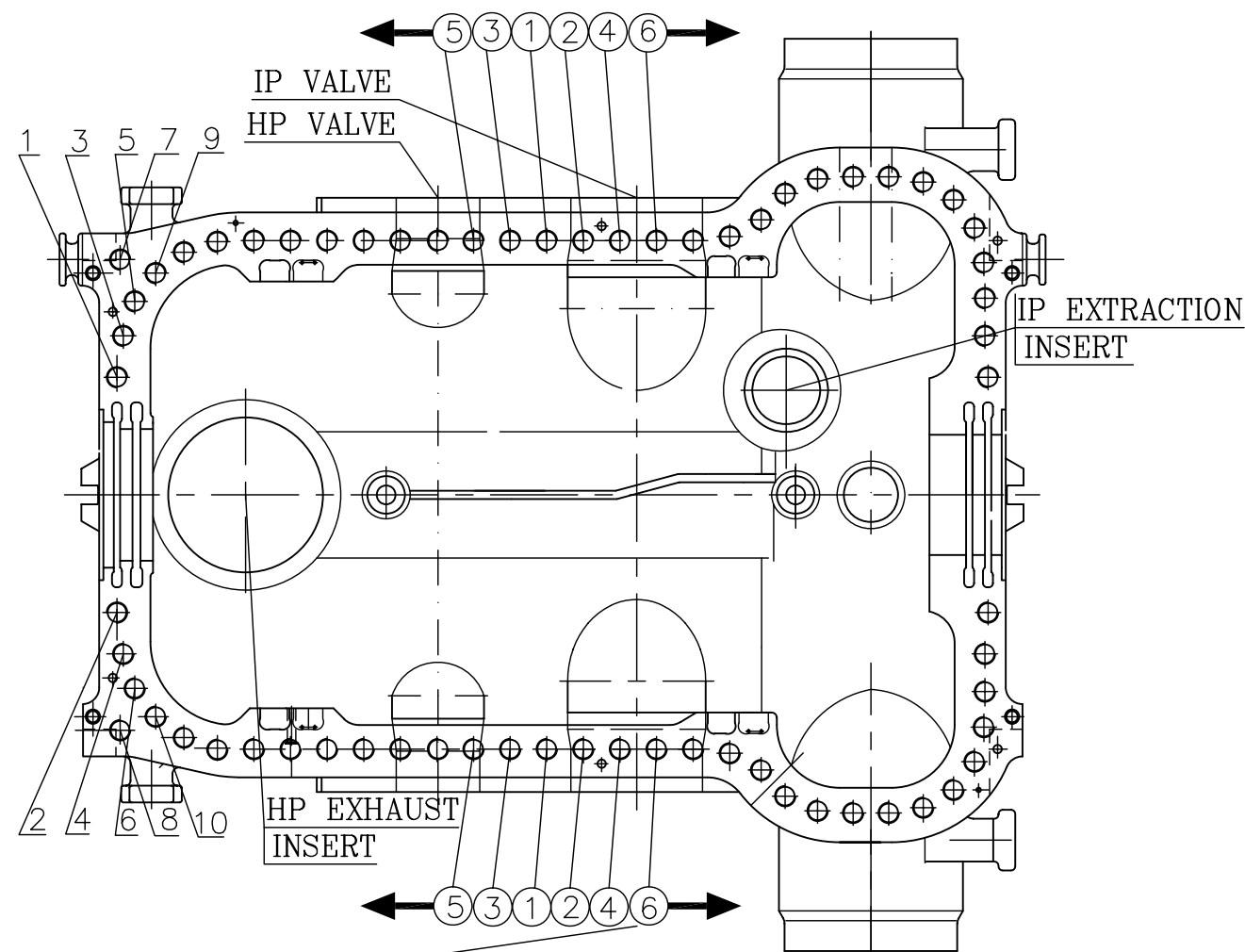


OUTER CASING



SEQUENCE OF TIGHTENING: -

START AT THE MIDDLE OF THE CASING. GO-OUT IN BOTH TS & GS DIRECTIONS. BOTH SIDES OF PARTING PLANE SHOULD BE TIGHTENED PARALLELY.

L_A = LENGTH OF STUD BEFORE CURRENT TIGHTENING
 L_o = ORIGINAL LENGTH OF STUD BEFORE FIRST TIGHTENING
(FOR FIRST TIGHTENING, $L_o = L_A$)
 L_o' = DIFFERENCE IN HEIGHT OF PIN AND STUD
 L_v = ELONGATION OF STUD

STUD CODE

ST-STUD

SB-STUD BOLT

TIGHTENING CODE:

HAND TIGHTENING

A

GAS HEATING

B

ELECTRICAL HEATING

C

HYDRAULIC THIGHTENING

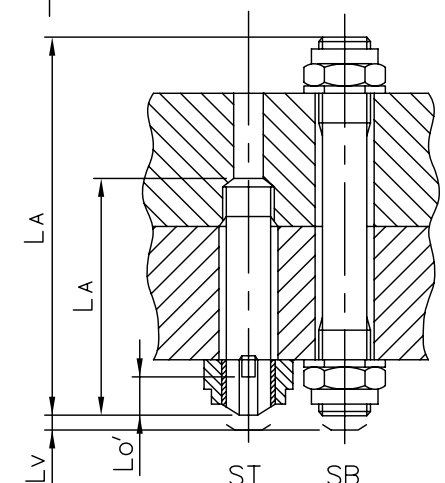
D

SPECIAL

S

FOR NIMONIC BOLTS: $L_{max} = L_o + [(L_o - \phi d) \times 0.004]$ FOR OTHER BOLTS: $L_{max} = L_o + [(L_o - \phi d) \times 0.01]$ BOLTS ARE TO BE REPLACED WHEN L_A REACHES L_{max}

ϕd = NOMINAL THREAD SIZE
eg. FOR M64, $\phi d = 64$




NOTE: - *)

- 1) L_o IS TO BE MEASURED BY Q.C. FOR EACH STUD AND RECORDED. L_{max} IS TO BE COMPUTED BY Q.C. FOR EACH STUD AND RECORDED
- 2) THE NUT ROTATION ANGLES AND TORQUE VALUES GIVEN ARE ONLY FOR GUIDANCE. THE ACTUAL L_v IS TO BE MEASURED AND RECORDED FOR EACH STUD. THIS SHOULD BE WITHIN GHE SPECIFIED TOLERANCES

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

K30-16

	BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		NAME	SIGN	DATE	NO.OF VAR.
	DEPT. I.T.D.	DRN.	DSR		22.2.01	
	CODE 415	CHD.	DSR		22.2.01	
		APPD.	DSR		22.2.01	-N.A.-
SCALE NTS	WEIGHT (KG) -N.A.-	REF. TO ASSY. DRG. -N.A.-	ITEM NO. -N.A.-	NO.OF ITEMS -N.A.-		
TITLE BOLT TIGHTENING PROTOCOL FOR OUTER CASING			CARD CODE N.A.	DRAWING NO. 3-301-00-51421		REV. 02
				SHT. No 1	NO. OF SHT. 2	