

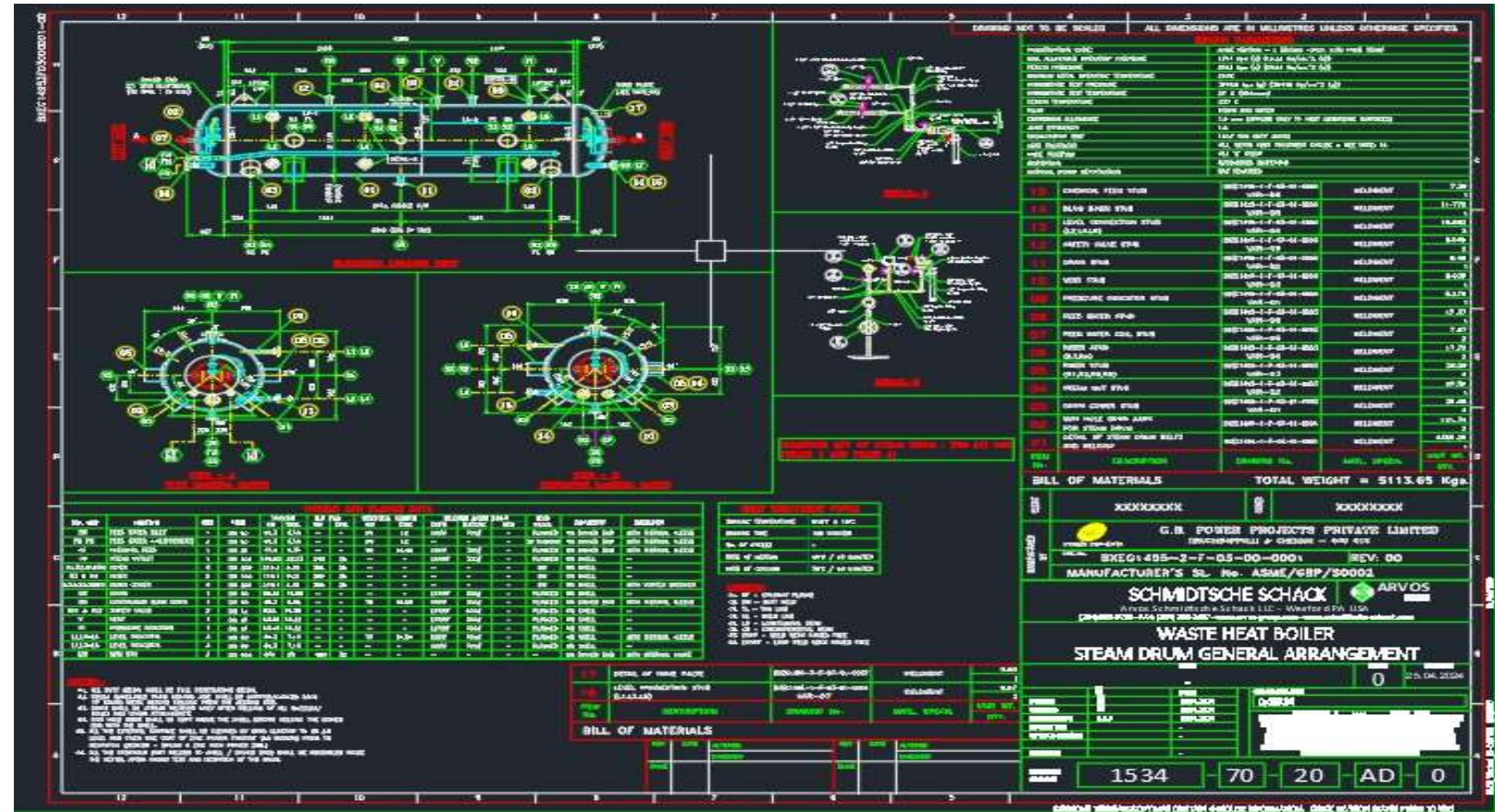
## Detail Engineering for Steam drum with ASME code calculation

Client: ENMAS ANDRITZ PRIVATE LIMITED, CHENNAI

Project: Duffin Creek Treatment Plant, Pickering, Ontario, Canada

### Scope :

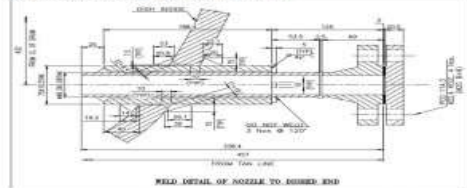
- Detail engineering services for Steam drum
- General Arrangement Drawings
- Drum internals
- Drum nozzle sizing
- Manway & Supports calculation
- ASME Code calculations



**Detail Engineering for Steam drum with ASME code calculation**

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GB POWER PROJECTS		STRESS CALCULATIONS		SHEET	61
EQPT :		STEAM DRUM	Mfr's Serial No.:	REV.	00
DWG NO:	1534-70-24-AD-0	ITEM DESCRIPTION	VAR - 05 (STUB ROD)	ITEM NO : 2	Reference
<b>13. STEAM DRUM DISHED END HOLE COMPENSATION CALCULATIONS :</b> ( For Nozzle abutting the Vessel Wall - As per Clause PG-33 ) <b>E. COMPENSATION CALCULATION FOR CONTINUOUS BLOWDOWN THERMAL SLEEVE (BD)</b> DISHED END - OD 1232 x 32 Thk Continuous blowdown thermal sleeve - OD 75 x 10.50 Thk 					
Total Cross Section Area in a given Plane for which Compensation is Required for a Vessel under Internal Pressure shall be not less than A, as defined in Fig. PG-33.1.					
<b>I. Area Required for Compensation</b>					
The Area Required for Compensation (A)		=		(d x t <sub>r</sub> ) x F	
Where,					
Diameter in the Plane under Consideration of the Finished Opening ( d )		=	54.000	mm	Fig. PG - 33.1
Nominal Thickness of Nozzle Wall ( t <sub>n</sub> )		=	10.500	mm	
Required Thickness of a Seamless Shell or Head ( t <sub>r</sub> )		=	12.296	mm	
Factor which Compensates for the Variation in Pr. Stresses on Different Planes with respect to the Long.		=	1.000		
Substituting Above Values in the Equation,					
The Area Required for Compensation ( A )		=	54 x 12.296 x 1		
		=	663.984 sq.mm		
PG - 33.2					
REV.Nr.	DESCRIPTION		PREPARED	CHECKED	APPROVED
PREPARED	APPROVED		Doc.No	REV	Sheet
CHECKED			BXEG1495-2-F-03-00-0001	0	