

5. COMPARISON OF THE DESIGN CHARACTERISTICS OF THE MMISG AND MISG

Design characteristics of media for both inverse steam generators are given in Table VIII.

Design characteristics of the MMISG and MISG structures are shown in Table IX.

Comparison of material used for the MMISG and MISG is given in Table X.

TABLE VIII.
COMPARISON OF DESIGN CHARACTERISTICS OF THE MMISG AND MISG

Parameter	Dimension	Value	
		MMISG	MISG
SODIUM:			
inlet temperature	°C	500	505
outlet temperature	°C	302	309
pressure	MPa	<0.6	<0.6
FEED WATER:			
inlet temperature	°C	210	210
pressure	MPa	10	13.73
SUPERHEATED STEAM:			
temperature	°C	475	490
flow rate	kg/s	11.625	11
THERMAL POWER:	MW	28	26.3

TABLE IX.
COMPARISON OF DESIGN CHARACTERISTICS OF THE MMISG AND MISG
STRUCTURES

Structural part	Size or number	
	MMISG	MISG
Number of branches	8	1
Number of modules in each branch	3	1
Total number of modules	24	1
Tube bundle in module:		
Number of heat transferring tubes	19	246
Tube O.D., mm	25	20
Tube wall thickness, mm	3 (3.5)	3
Module shell tube O.D., mm	194	521
Number of tube plates in module		
- double tube plate	2	-
- single tube plate	-	2
Total number of tube plates	24	2
Steam generator mass to thermal power ratio, kg/MW	1000	345

TABLE X.
MATERIALS USED FOR THE MMISG AND MISG MODULE DESIGN

Structural part	Standard of used materials	
	MMISG	MISG
Heat transfer tubes	CSN 415418	DIN 17175
Tube plates	CSN 415418	CSN 415418
Module shell tube	CSN 415128	CSN 415128