Chapter		Topics	Page No.
		List of Tables	I
		List of Figures	II- III
		Nomenclature	IV
I		INTRODUCTION	1-5
	1.1	Energy scenario in India	1
	1.2	Solar energy and its industrial application	1-3
	1.3	Prospect of utilization of solar thermal energy in industrial sector in Assam	3-5
	1.5	Objectives	5
II		REVIEW OF LITERATURE	6-10
	2.1	Performance improvement by technological intervention	6-9
	2.1	Theoretical model developed for evaluation of performance	9-10
III		MATERIALS AND METHOD	11-27
	3.1	Design of Double pass counter flow solar Hot Air Generator (DSHAG)	11-13
	3.2	Thermal Performance analysis of Double pass counter flow solar Hot Air Generator	14-21
i	3.3	Hydraulic performance analysis	21-22
	3.4	Description of Test set-up used for experimental performance evaluation of DSHAG	22-27
IV		RESULTS AND DISCUSSION	28-40
	4.1	Theoretical prediction of the performance of the DSHAG using simulation	28
	4.1.1	Effect of fin height on performance of DSHAG	28-29
	4.1.2	Effect of fin spacing on performance of DSHAG	29-30
	4.1.3	Effect of radiation on performance of DSHAG	30
	4.1.4	Effect of flow rate on performance of DSHAG	30-31
	4.2	Performance of the DSHAG assessed through experiments	31-40
	4.2.1	Outlet temperature of Double pass solar air heater for	31-33
		different solar insolation	
	4.2.2	Variation of outlet temperature with varying mass flow rate	34
	4.2.3	Thermal efficiency of the DPSHAG for varying solar	34-35
	.	insolation and mass flow rates	

.

.

	4.2.4	Heat loss coefficient with varying insolation	35-36
	4.2.5	Thermal output power with varying mass flow rate	36
	4.2.6	Pressure drop for varying flow rate	37
	4.2.7	Variation of thermohydraulic efficiency with mass flow rate	37-38
	4.2.8	Validation of simulation results	38-39
	4.3	Scope of DHAG for industrial application in Assam	40
v		CONCLUSIONS	41
		REFERENCES	42-43

.

List of Tables

Table No.	Particulars	Page No	
Table 1.1	Few industrial processes and the required operational temperatures	2	
Table 3.1	Values of certain parameters of the DSHAG considered for performance assessment	20	
Table 3.2	Specification of the centrifugal blower used in the experiment		
Table 3.3	Specifications of the thermocouple		
Table 3.4	Specifications of Pyranometer		
Table 3.5	Specifications of anaemometer		
Table 4.1	Collector Performance for different fin height		
Table 4.2	Collector Performance for different fin spacing		
Table 4.3	Collector Performance for different solar radiation		
Table 4.4	Collector performance different mass flow rate		
Table 4.5	Scope of DSHAG in industrial application		

Figure No.	Particulars	Page No
Fig. 1.1	Average solar insolation in Tezpur (Assam) during the year	4
Fig. 3.1	Side cross sectional view of DSHAG	12
Fig. 3.2	Front cross-sectional view of DSHAG	12
Fig. 3.3	Schematic of Double Pass Counter Flow Solar Hot Air	13
	Generator (DSHAG)	
Fig. 3.4	Schematic of heat transfer coefficients in DSHAG	14
Fig. 3.5	Flowchart indicating the procedure of estimation of outlet air	20
	temperature of DSHAG	
Fig. 3.6	Flowchart indicating the procedure of estimation of pressure	22
	drop	
Fig. 3.7	Centrifugal blower	25
Fig. 3.8	K- type thermocouple	25
Fig. 3.9	Pyranometer	25
Fig 3.10	Multimeter	25
Fig 3.11	Data logger	26
Fig 3.12	Anaemometer	26
Fig 3.13	Front view of the designed DSHAG	26
Fig 3.14	Side view of the designed DSHAG	27
Fig 3.15	Experimental test set-up of DSHAG	27
Fig 4.1	Variation of thermohydraulic efficiency for varying no. of fins	29
Fig. 4.2	Experimental results of DSHAG at 0.02 kg/s	32
Fig. 4.3	Experimental resullts of the DSHAG at 0.04 kg/s	33
Fig. 4.4	Experimental results of DSHAG at mass flow rate- 0.03 kg/s	33
Fig. 4.5	Air outlet temperature for varying solar insolation	34
Fig. 4.6	Thermal efficiency for varying mass flow rate	35
Fig. 4.7	Overall heat loss coefficient for varying insolation	36
Fig. 4.8	Variation of thermal output power for varying mass flow rate	37
Fig. 4.9	Total pressure drop across the collector	36

List of Figures

Fig. 4.10	Thermohydraulic efficiency for varying flow rates	37
Fig. 4.11	Comparison of theoretical and experimental results for 0.03	38
	kg/s mass flow rate	
Fig. 4.12	Comparison of theoretical and experimental results for 0.03	39
	kg/s mass flow rate	

Nomenclature

A _c	Surface area of the collector (m ²)	V_{α}	Wind velocity (m/s)	
$A_{f,c}$	Cross sectional area of fins (m ²)	W	Width of the Collector (m)	
A_f	Total surface area of fins (m ²)			
C_p	Specific heat of air	Subscripts		
D_h	Hydraulic diameter (m)	8	glass cover	
f	Fraction factor	m	mean	
F_R	Heat removal factor	b	back	
h	Heat transfer coefficient (W/m ² K)	C .	convective	
H	Depth of the channel (m)	f	fluid	
$\mathrm{H}_{\!f}$	Height of fins (m)	i	inlet	
h_w	Wind heat transfer coefficient	0	outlet	
H_{f}	height of the fins (m)	p	absorber plate	
Ι	Solar intensity (W/m ²)	r	radiative	
L	Length of the collector (m)	1	upper	
k	Thermal conductivity	2	lower	
'n	Mass flow rate (kg/s)	th	thermohydarulic	
N	No of fins			
Re	Reynolds number	Greek		
Pr	Prandtl number	α	Absorptivity of collector plate	
δP	Pressure drop	ρ	Density	
Р	Power (W)	μ	Dynamic Viscosity	
Т	Temperature (°C)	Э	Emissivity	
t _f	Thickness of fins (m)	τ	Transmittivity	
U _b	Bottom loss coefficient (W/m ² K)	η	Efficiency (%)	
V	Velocity of flowing air (m/s)			

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