MRC Automation & Green Technology Fund

Company name:DURAMITT SDN BHDProject location:Kulim, KedahProject Description:Biomass BoilerRelated Products:Supported, Unsupported and Bonded polymer dipped
industrial glovesDuration:Sep 2018 – Aug 2019Source of financing:Bank Ioan









Company Profile

- Established in May 2000
- Our Products: Polymer Dipped And Bonded Industrial Glove



Monthly Electricity Consumption

ELECTRICITY CONSUMPTION



HEATING AMOUNTED TO 70% OF TOTAL ELECTRICITY CONSUMPTION EQUIVALENT TO 12.5% OF DIRECT MANUFACTURING COST.

TARGET TO REDUCE HEATING COSTTO 9.5% OF DIRECT MANUFACTURING COST24% HEATING COST REDUCTION.

Electricity Consumption

Breakdown Of Electricity Consumption For 2018

	<u>MWH</u>		<u>MWH</u>	<u>%</u>
1 Air Con	34	1 Pressurized Air & Cooling	203	8
2 Lighting	74	2 Lighting	74	3
3 Air Compressor	112	3 Mechanical Movement	475	19
4 Chiller	56	4 Heating	1775	70
5 Drive Motor	404			
6 Blower	8			
7 Fan	55			
8 Electric Heater	1775			
9 Hydraulic Power Pack	8			_
	2526		2526	

DURAMITT ENERGY FLOW CHART



WHY CHOOSE PROCESS HEATING COST REDUCTION?

•70% of Total Electrical Energy used for Process Heating.

• Process Heating Cost Constitute to 12.5 % of Manufacturing Cost.

WHY BIOMASS BOILER ?

- From the research done, the most efficient fuel available at that point of time at our location is wood.
- Carbon Neutrality
- Renewable
- Reduces Waste
- It produces lower level of Sulphur Dioxide

FUEL COMPARISON

STEAM BOILER OPERATION COST CALCULATION SHEET

No PARAMETER UNIT Case 1 Case 2 Case 4 Case 5 1 BASIS MFO Diesel Wood Pellets Electricity 3 Actual steam consumption Kg/hr 1000 1000 1000 3 Actual steam consumption Kg/hr 1000 1000 1000 1000 Operating day per month days 26					1 Ton of stea	am equivalent to 6	528KW
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		% Cost Difference Against Electricity		42	28	52	

BIOMASS BOILER



BIOMASS BOILER INSTALLATION

BIOMASS BOILER OPERATION





System Performance Analysis

Energy Cost		Energy Source	After New Boiler Installation
		Electricity	Steam
1)	Total Energy Consumption (KWH)	1774656	
L)	(For Heating)		
2)	Total Production Output 2018 (Pr)	2562324	
3)	Heating Energy per pr glove (KWH/Pr)	0.693	
4)	Electricity Cost (RM/KWH)	0.441	0.212
5)	Heating Cost Per Pair Glove (RM/Pr)	0.305	0.147
6)	Total Heating Cost (KRM)	783	376
7)	Saving(KRM)		406
% Saving			52
	Capacity Increase		
8)	New Productin Line - Pr/Year	5616000	
9)	Total Heating Cost (KRM)	1715	825
10)	Saving(KRM)		891

TOTAL HEATING COST TREND



ENERGY COST SAVING TREND



ACCUMULATED SAVING TREND (KRM)



GHG CO2 EMISSION REDUCTION TREND



ACHEIVEMENT SUMMARY

• Heating Cost Per Pair Glove

	<u>RM/Pr</u>	<u>% Reduction</u>
Original	0.3869	
Target	0.1470	62.0
Actual	0.0909	76.5

Green House Gas (CO2) Emission Reduction 16,790 Ton

THANK YOU