

ARVIND

Energy Efficiency & Performance - Arvind Ltd ,Div .- Ankur Textiles.



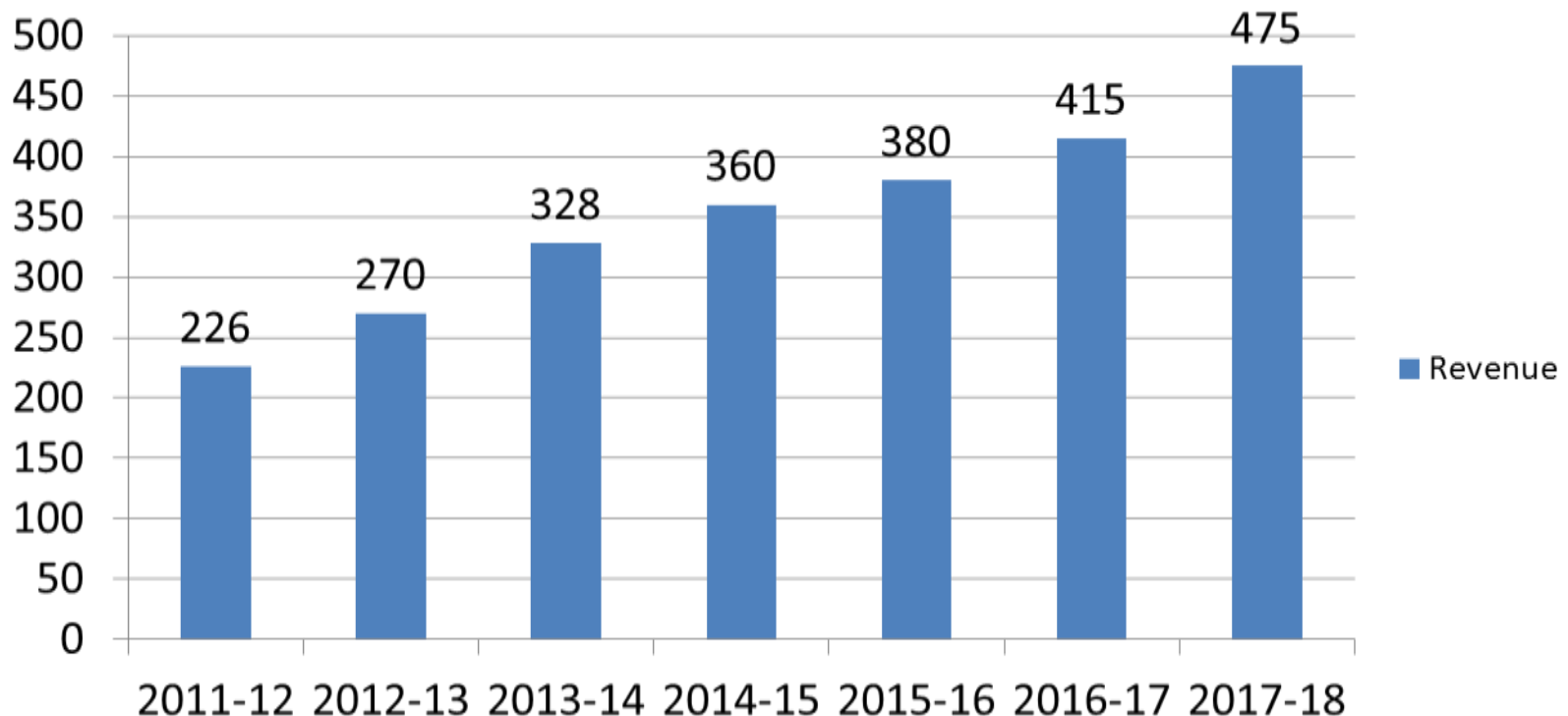
A Brief :

Ankur Textiles was established in 1914 and was earlier known as Laxmi Cotton Mills Ltd. In 1978 Arvind Mills Ltd a unit of well known Lalbhai Group had taken over this unit. It is the oldest composite textile running mill in Ahmedabad.

Core product of our unit is Voiles fabric with other valuable products.

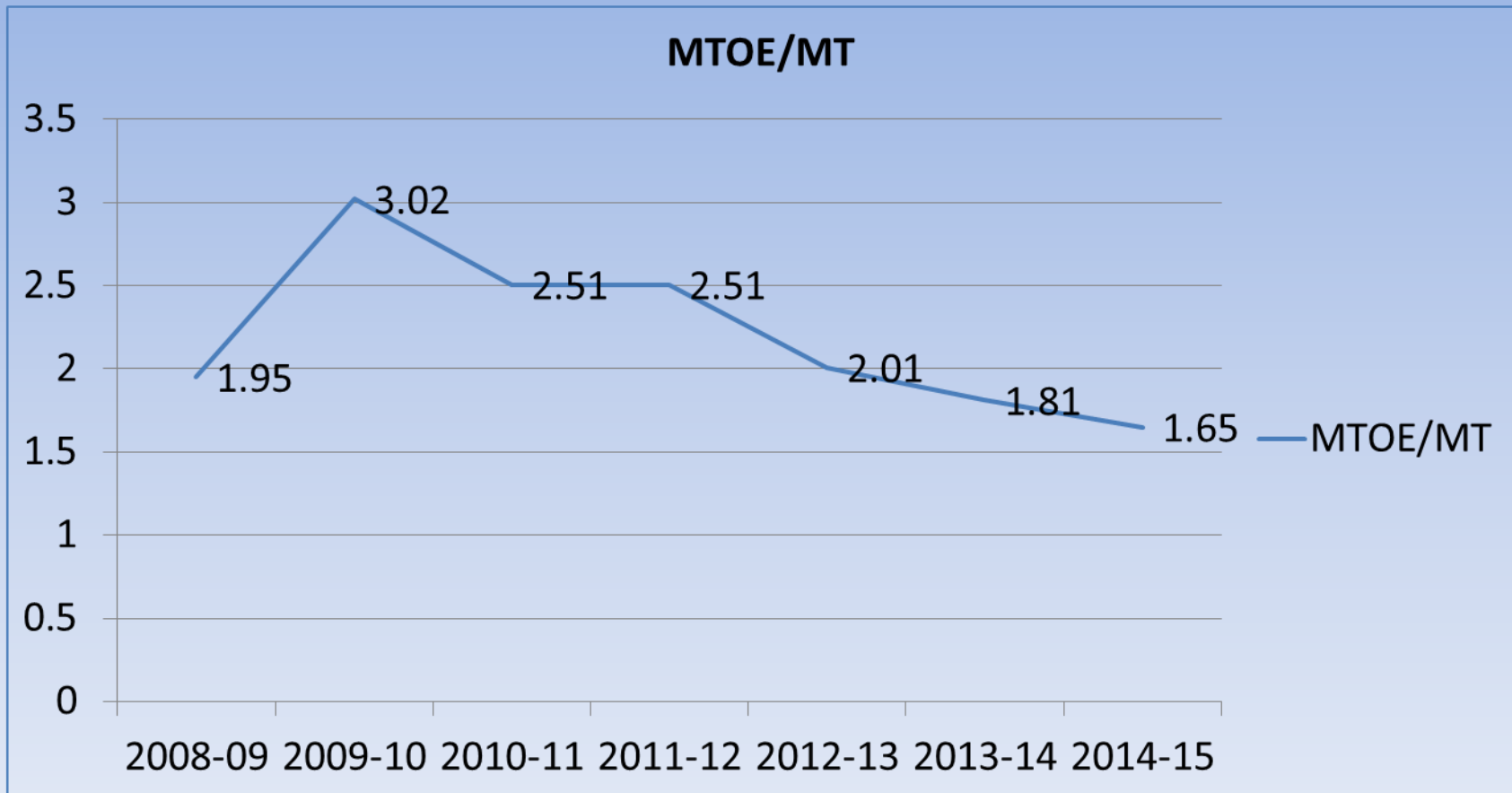
Growth Plan :Arvind Ltd, Div. Ankur Textiles.

❖ Over last 5 Years, Arvind Ltd, Ankur Textiles Revenue Growth has increased to **+14 %**, Expected to grow **+12%** over Next 3 Years



Our unit have in house capacity of 25% Spinning, 5% Weaving and 100% Processing. We purchase yarn, weave grey fabric by job work and purchase required ready grey fabric.

Specific Energy Consumption – (As per PAT calculation)



Energy Conservation Initiatives ..

IMPROVEMENT IN AIR
COMPRESSED PERFORMANCE
BY SHIFTING SUCTION FILTER
POSITION.



Sl. No.	Parameters	Before	After Suction Filters Position changed
1.	Avg. Suction Air Velocity – M /Min	66.5	92.6
2.	Output – CFM	813	1132
3.	Volumetric Efficiency - %	56 %	78 %
4.	Avg. Input Power – KW	232	228
5.	Sp. Power Consumption – Watt /CFM	285	201
6.	Remarks	Suction Vane Opening-60 %	Suction Vane Opening- 40 %

Energy Conservation Initiatives ..

INVERTOR DRIVE IN HUMIDIFICATION PLANTS



LED LAMP IN SHED

Saving by LED lights

Measure/ EPI	Estimated Energy saving KWH/day	Monetary Saving in Lac Rs/ year	Cost lacs RS	Payback in month
Replacement of 3000 nos of 80 Watts Florescent tube fittings by 36 Watts LED tube fittings (Till now 250 nos fitting changed)	3888	114.56	25.50	2.67
Replacement of 85 nos of 250 to 400 watts Metal Helide Lamp fittings by 120 Watts LED fittings (Till now 10 nos fitting changed)	571	16.85	6.38	4.54

We will complete entire work before May 2016.

Electric Saving by Other steps

Electric Saving by Other steps				
Measure/ EPI	Estimated Energy saving KWH/day	Monetary Saving in Lac Rs/ year	Cost lacs RS	Payback in month
Power factor to be improve from 0.97 to 0.99 to reduce transmission losses.	50	1.50	1.25	10.03
Provided 32 nos VFD in H palnt fans.	2688	79.30	20.80	3.15
To provide VFD in 7 nos Auto coner (with Pressure transducer)	770	22.72	14.00	7.40
Provided timer circuit for alternative running of Aerators at ETP plant (By maintaining DO level)	264	8.01	0.25	0.37

Speed Optimisation in Ring frame.

Speed RPM	Power Consumption in KWH	% Speed Increased	% Power Increased
11300	6.13	100.0	100
11500	6.55	101.8	106.9
12000	7	106.1	113.3
12800	8	112.5	126.7
13000	8.5	113.3	129.6
13250	8.8	115.0	131.4

Replacement of old boiler to Energy Efficient Boiler

- ❖ Old Smoke tube Boiler Ratio = 6.1 kg of Steam / Kg of Fuel.
- ❖ Installation of 8 TPH FBC type energy Efficient boiler.
- ❖ After replacement of new energy efficient Boiler – 7.7 kg of Steam/ Kg of Fuel.



Annual Saving	=	Rs. 108 Lacs Rs.
Investment	=	Rs. 80 Lacs Rs.
Payback	=	9 Months

Replacement of steam Trap

- ❖ Replace Float type steam trap in place of Thermodynamic steam Trap
- ❖ Installed Pressure Power Pump to recover 55 M3 Condensate from Plant utilizing it as hot water, Earlier it was drained to ETP
- ❖ The average temp. of Hot water is 75 C. Considering fresh water temp 40 C.



Annual Saving	=	Rs. 18.3 Lacs
Investment	=	Rs. 12.0 Lacs
Payback	=	8 Months

Energy Saving by Installation of Pressure Reducing valve for Cleaning Air Application

- ❖ Cleaning Air has been provided from Main compressed air network.
- ❖ Pressure requirement for cleaning Air application is not More than 2.5 Barg.
- ❖ Pressure Reducing valve has been installed & pressure 2.5 Barg has been maintained at cleaning Air header
- ❖ Time of operation has been also fixed for cleaning Air for 12 hrs per day.

Annual Saving	=	Rs. 3.64 Lacs
Investment	=	Rs. 1.25 Lacs
Payback	=	4 Months



Future Steps for Energy Saving.

- Replacement of Old type pumps and motors with Energy efficient.
- Replacement of H plants by Fog type plants.
- Pressure transducer on water booster pump to control water consumption at optimum level.

How to Achieve this

- Continuous & Proactive Efforts**
- Internal Audit Team formation for Energy Management**
- Assistance from External Team i.e. EAS, Thermax, Forbes Marshall Etc..**
- Strong Management Will & support**

ARVIND

THANK YOU