

## Major Energy Conservation Projects implemented in year 2007

### **1 ) Reduction of Batch Cycle Time (BCT) for gear oil (Product name: BP energear EP 90) by 3 Hrs**

Actual Batch cycle time for Energear EP 90 : 9 Hrs  
Energy consumption per batch of Energear EP 90 : 9 X 11 KWH  
: 99 KWH

Batch Cycle time reduction by 3Hrs after process improvement : 66 KWH

Total KWH saving by process improvement : 99 – 66  
: 33 KWH

No. of batches taken during 2007 : 70  
Total energy (KWH) saving during 2007 (70 X 33) : **2310 KWH**

### **2) Installation of new screw pump in place old inefficient pump of 600LPM.**

Reduction in transfer time of Hitec 5777 additive per batch : 20 min  
Electrical energy saving with above reduction in time/batch : 6.5 KWH  
Avg no. of batches per month : 15  
Electrical energy saving from the said pump per month : 15 X 6.5 KWH  
: 98 KWH  
Electrical energy saving per year : 98 X 12 months  
: 1176 KWH

Energy saving from the same pump during tanker loading : 6.5 KWH  
Average no. of tanker loading in a month : 4  
Electrical energy saving during tanker loading in a month : 26 KWH  
Electrical energy saving while tanker loading /year : 26 X 12 months  
: 312 KWH

Total energy saving by replacing the old inefficient pump : 1176 + 312  
: **1488 KWH**

### **3) Elimination of motorized conveyor from 5L new filling line**

Reduction in Units = 0.75 KW X 240 Working days X 8 Hr.  
= 1440 KWH.

### **4) Reduction of electrical consumption by providing auto shut off valves on air compressed lines entry point of each filling line.**

Motor rating : 45 KWH  
Energy consumption per day (45 KWH X 15 Hrs) : 675 KWH

Energy saving with reduced air losses ( considering 1 hr a day)	: 45 KWH
Energy saving per month ( 45 KWH X 22 working days)	: 990 KWH
Energy saving per year (45KWH * 22 working days *12 months)	: 11880 KWH

#### **5) Reduction of Pack Changeover time in 3L filling lines by process improvement**

Time reduced for every product changeover in filling line	: 30 min
Average no. of changeovers in a month	: 10
Total reduction in changeover time for a month	: 300 min
Total reduction in changeover time for a year	: 60 Hrs
Energy consumption per line per hour	: 25 KWH
Energy saved per filling line	: 1500 KWH

#### **6) Tank Rationalisation of T-214**

Drive motor rating	: 2 KWH
Average loaded time of pump in a day	: 6 Hr
Electrical energy saving per day	: 12 KWH
Electricity energy saving per month (33 KWH * 22 working days)	: 264 KWH
Average energy saving per year	: 3168 KWH