



Permanent Magnetic Coupling

Coupling เพื่อลดค่าไฟฟ้ามอเตอร์สำหรับปั้มน้ำ - พัดลม



**Saving Energy
with
divided
Vibration**

Case Reference : PMC - fixed gap



Closed Cooling Water Pump in Thermal Power Plant (SPIC) :

- **Motor** : 132 kw * 0.38 KV * 4P
- **Energy Saving Rate** : 25%
- **Electricity cost Saved** : \$ 16,695/year

Condition	Current (Amp)	Speed (RPM)	Running hours/year	Total kw used (10,000 kWh)
Before	180	1,480	8,200	77.7
After	134	1,333	8,200	57.8

Cooling pump in Plastic Chemical Plant :

- **Motor** : 75 kw * 380V * 4P
- **Speed (RPM) decreased** : 13%
- **Energy Saving Rate** : 14%
- **Electricity cost saved** : \$14,420/year



Case Reference : PMC - fixed gap

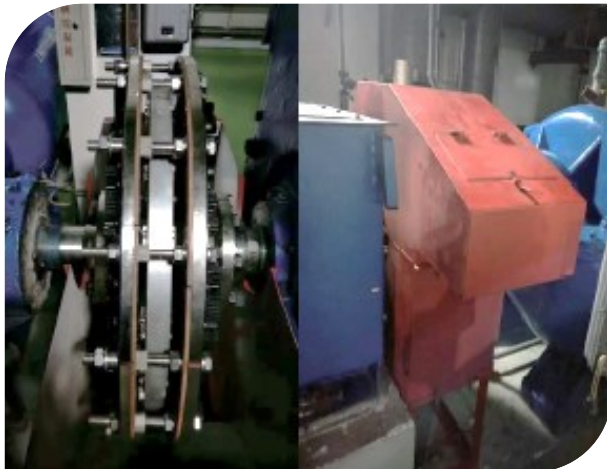


Cooling Water Pump in Petrochemical Plant :

- **Motor** : 1300 KW * 3.3KV
- **Energy Saving Rate** : 10%
- **Electricity cost Saved** : \$ 78,443/year

Condition	Current (Amp)	Speed (RPM)	Running hours/year	Total kw used (10,000 kWh)
Before	246.7	710	8,200	925
After	222	675	8,200	832

Closed Cooling water system (Power plant)
355 kw pump



Boiler water system (Cement plant)
155 kw pump

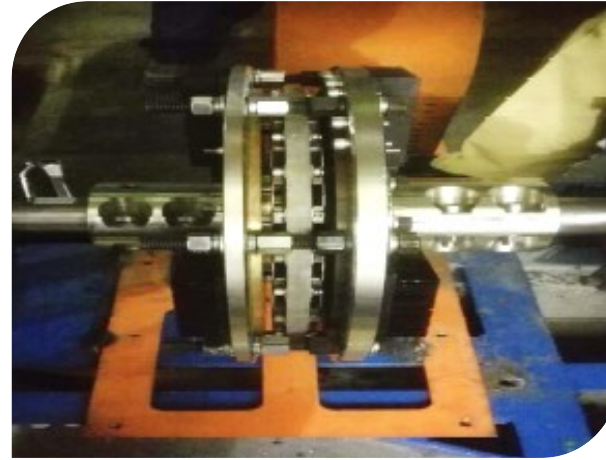


Case Reference : PMC - fixed gap

Process water system (Chemical plant)
37 kw pump



Closed Cooling water system (Power plant)
132 kw pump



Cooling water system (Chemical plant)
90 kw pump



Closed Cooling water system (Power plant)
110 kw pump

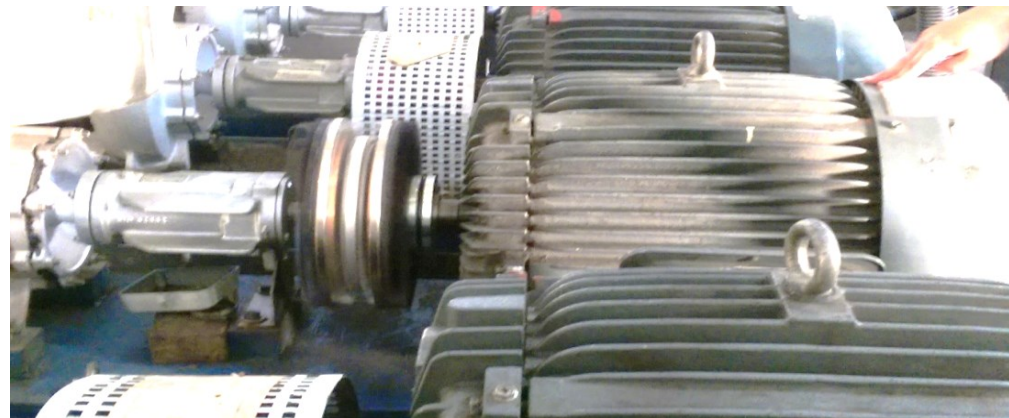
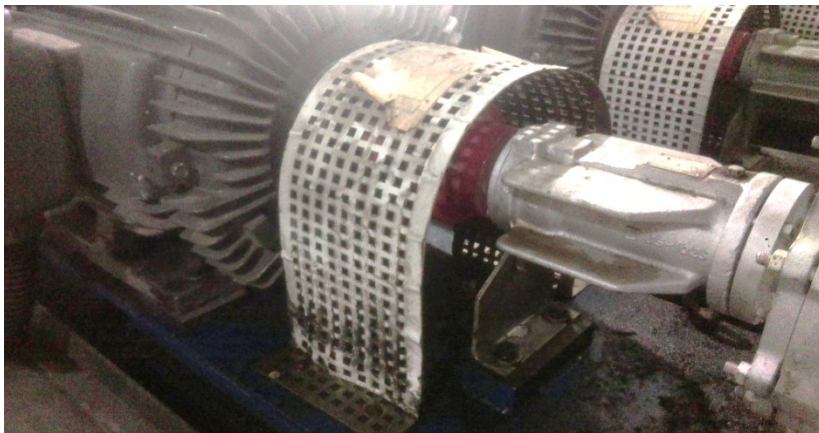


Case Reference : PMC - fixed gap

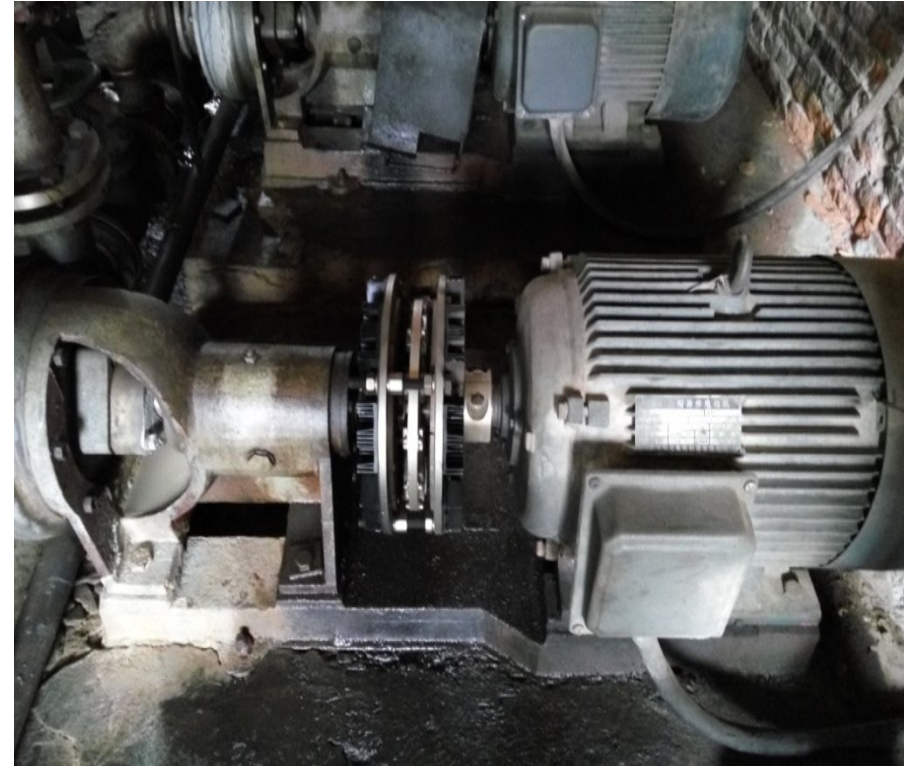
Thermal coal pump equipment have 3 vibration overhaul/year to avoid accidents caused by oil leakage. After Permanent magnet coupling, it can reduce vibration, lower centering error, lower maintenance cost and elongate service life on top of energy saving.

	Min.	Max.	Avg.
Energy saving rate	11.5 %	15.6 %	13.6 %
Vibration decrease rate	12.2 %	71.6 %	42 %

Rated speed (RPM)	Speed after upgrading (RPM)	Speed decrease (%)	Electricity saved / year (kw)
3,560	3,180	10.7%	48209
Rated flow (m3/h)	New air flow (m3/h)	Energy saved (A)	Electricity price (BHT/kW-Hr)
260		10.9	2.6
Rated pressure (m)	Pressure diff. of thermal coal boiler (kg)	Energy saving rate (%)	Electricity saved / year (BHT)
60	2.2	13.6%	125,000
Original current (A)	New current(A)	Running hours / year(hr)	CO2 Reduction/ year (ton)
80.4	69.5	8400	30757



Case Reference : PMC - fixed gap



Chemical fertilizer plant

- Motor 90kW x 380V x 4P
- Energy Saving rate : 40%
- Yearly Electricity fee saved : Baht 604,800/year

Case Reference : PMC - fixed gap



Chemical plant

- Motor 75kW x 380V x 4P
- Energy saving rate : 15%
- Yearly electricity fee saved : Baht 180,000/year

Paper plant

- Motor 110kW x 380V x 6P
- Energy saving rate : 10%
- Yearly electricity fee saved : Baht 176,000/year



Case Reference : PMC - fixed gap



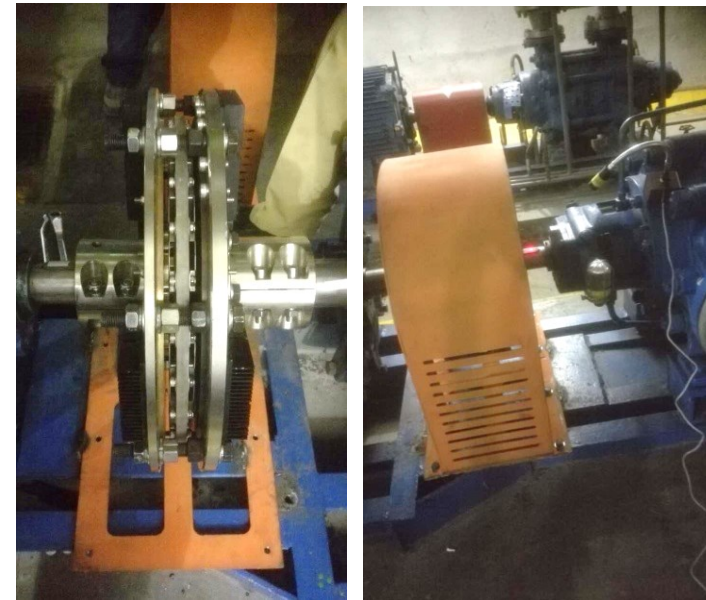
Power plant

- Motor 111kW x 380V x 6P
- Energy saving rate : 18%
- Yearly electricity fee saved : Baht 320,000/year



Power plant

- Motor 132kW x 380V x 4P
Energy saving rate : 22%
Yearly electricity fee saved :
Baht 460,000/year



Power plant

- Motor 132kW x 380V x 2P
- Energy saving rate : 15%
- Yearly electricity fee saved :
Baht 316,000/year

Case Reference : PMC - Adjustable gap



Water Pump Station in Steel Plant :

- **Motor : 260KW**
- **Voltage : 380V**
- **Speed decreased: 21%**
- **Energy Saving Rate : 49%**

	Power (kw)	Current (Amp)	Speed (RPM)	Motor Efficiency (%)	Power factor	Daily shutdown time (hr)	Working days/month	Total electricity used (10,000 kwh)
Existing Adjustment by Valve opening	225.8	410	1479	93	0.9	24	30	185.16
Adjustment by PMC-A	113.9	200	1167	93	0.9	24	30	93.4

Case Reference : PMC - Adjustable gap



Refinery water system (Petrochemical plant)
800 kw pump



Condensation system (Power plant)
800 kw pump



Fan system (Power plant)
1400 kw pump



Cooling water system (Petrochemical)
800 kw pump