

APPLICATION CASE STUDY



DOC.NO. : AMTCS-12

HOST ORGANISATION : SOUTH INDIA VISCOUSE, COIMBATORE.
PERFORMED ON : DECEMBER 1993
INDUSTRY : RAYON
APPLICATION : RAYON SPINNING MACHINE
MOTOR RATING : 3 PHASE AC IND.MOTORS 200 NOS.
FREQ : 133 Hz.
POWER RATING : 125W each
VOLTAGE : 104V

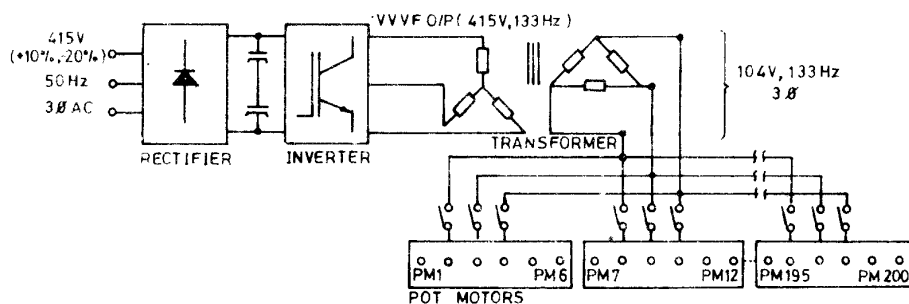
PREVIOUS SYSTEM : The conventional drive system consists of a rotary converter consisting of a motor-alternator set of 100KVA, to supply one rayon spinning machine. The rotary converter is prone to break downs, resulting in long downtimes, and requires regular maintenance.

NEW SYSTEM : 160KVA AC Driver for the rayon machine :

The requirements for the inverter drive are :

1. Sized to meet the requirement of slam-starting of 24 motors simultaneously and to sustain the current of two burning pot motors.
2. Operation at 50°C ambient temperature,
3. Operation in an environment where corrosive gases such as CS 2 and SO 2 are present.
4. Power loss ride-through of 1 sec. for a brown-out and 0.5 sec for a blackout.

BLOCK DAGRAM :



MERRITS

1. Reduced breakdowns-almost nil.
2. Continued operation in the case of a momentary loss of power.
3. Greatly reduced maintenance.
4. Convenience of a variable frequency.

Finally new system is flexible in operation, maintenance free, user friendly and saving considerable energy & manpower, hence directly improving production.

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