

How Emotron VFX drive boosts capacity and reliability at Alex Panels, India



Established in 2005, the Alex Panels partnership manufactures plastic panels for interior decoration, signage, balcony and canopy cladding, partition and ceiling panels, furniture and cabinets. Airports, hotels, hospitals, multiplexes, commercial and school buildings, and transport companies are among their many customers. The company produces panels (known as ACPs) consisting of two layers of aluminium skins around a thermoplastic core. These are coated with a pure thermoplastic fluoropolymer (PVDF) in a continuous lamination process. On exterior grade products, Kynar 500 / PVDF resins are used, with surface coatings containing 70% PVDF resins. Alex Panels' ISO and OHSAS certified production plant has a capacity of 900,000 m² ACP.

Extruder application caused downtime

Until recently, Alex Panels' extruder application ran with a DC motor and drive system, commissioned circa 2010. However, the system had begun to suffer recurring issues, such as failures in the DC drive panel and wear and tear of its carbon brushes, leading to huge production losses. In addition, the customer was having difficulties managing the system's starting current. An initial torque at 4% of rated speed was required, which demanded two 500 kVA gensets.



An engineer from CG Drives & Automation visited the site with our channel partner Sandeep Heavy Electrical Works. Together, they studied the existing system and load pattern, and then calculated what size of motor and VFD would be required to meet the demands of this application. The answer was an Emotron VFX48-750 variable frequency drive and a 250 kW/4-pole motor. Alex Panels accepted this recommendation, and the system is now working satisfactorily across the entire speed range.

Reliable production resumed

Alex Panels now has a maintenance-free system that delivers cost savings in the form of reduced labour and downtime. The operating cycle takes half the time it used to, and the whole system runs more smoothly. Service life and productivity have both been significantly improved. All while still delivering the required torque, even at 2 Hz, and with half the number of gensets.

IN BRIEF

Customer

- Alex Panels

Challenge

- Frequent failure of DC drive and DC motor
- High Initial torque

Solution

Replaced DC VFD and motor with AC system: VFX48-750 installed with 250 kW, 415 V, 416 A, 1486 RPM motor

Benefits

- Smoother operation
- Controlled torque
- Higher productivity
- Lower labour, maintenance and spare parts costs

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