

Case Study – Conveyor Drive Load Sharing

CHB Drives were engaged to rectify load sharing issues between two medium voltage variable speed drives used on a material bulk handling conveyor application in Western Australia. One of the drive pulleys had been recently swapped out. The new pulley was a different size to the original which caused the load sharing between the variable speed drives to go out of specification. One drive was now doing all the work and the other doing zero to minimal work. This resulted in loss of power available to the conveyor system as once the drive doing most of the work reached its current limit the conveyor system could not load up any further. This also resulted in the conveyor system bogging and being unable to pull away when starting loaded. CHB Drives were able to amend the variable speed drive configuration to account for the differences in pulley size and return the load sharing to be within specification.

Rectification steps included:

- Review of the load sharing control scheme and parameterisation,
- Verification of motor starting and speed settings,
- Utilisation of high-speed data acquisition system to validate load sharing improvements.

In general, symptoms of poor loading sharing between variable speed drives can include:

- Loss of system capacity or reverse power,
- Conveyors may become bogged easily,
- Difficulty starting conveyors especially when loaded,
- Increased mechanical wear on conveyor system,
- Overloading of variable speed drives,

If your conveyor shows any of the above symptoms of poor load sharing please contact CHB Drives. We can rectify these issues for you and ensure rated performance from your variable speed drive conveyor system.

