

# ***Safety System***

Multiskilled Resources Australia with the needs of our clients in mind has developed an award winning safety system capable of providing a SIL rated shutdown system with advantages surpassing those of traditional systems.

The Safety Shutdown System is a distributed, high speed system providing flexibility of application to perform a variety of tasks.



**multiskilled**  
RESOURCES  
AUSTRALIA

## **TECHNICAL ADVANTAGES**

- ✓ Capable of controlling multiple shutdown systems simultaneously such as Lanyard and Emergency Stops for Multiple Conveyors as well as Site Wide Emergency Stops
- ✓ Can accept a range of inputs including being linked to the plant fire alarm system
- ✓ Can be used on overland conveyors with long distances presenting no problem
- ✓ Can have safety rated outputs at multiple locations
- ✓ Can easily connect to Plant Control System and Scada for ease of Alarming
- ✓ Adaptable to site conditions and clients needs
- ✓ Underlying system is SIL3 Rated for reliable fault detection
- ✓ Fast response with Trip Time in fractions of a second
- ✓ Can Pre-Warn sensitive equipment like VVVF Drives before removing power

## **OTHER ADVANTAGES**

- ✓ Can be custom designed to meet clients needs
- ✓ Can comply with Safety Legislation
- ✓ Can reduce installation and plant running costs



## Award Winning System - Antiene

Multiskilled Resources Australia has been recognized for the control system installation at the Antiene Coal Unloader, which involves a Train Dump Station and overland conveyor system.

The safety system was chiefly developed to trip VVVF Drives at the Head and Tail end of a 5km Conveyor, where traditional systems were inadequate for this task.



The safety system allowed for communications to the Plant Control Scada where trip information was displayed visually.

SITE E/STOPS	
SITE E/S TOPS	
E/STOP	ERROR CODE
Control Room	2
Upper DS 1	0
Upper DS 2	0
Lower DS	0
SUB 1	0
SUB2	0
SUB3	0
AC2 Head End	0
AC2 Drive Station	0
AC2 Tail End	0
AC4 Head End	0
AC4 Tail End	0
Transfer Tower	0
MA1B	0

EXIT

ERROR CODES

Conveyor prestart sirens and lanyard trip strobes stationed at every lanyard were controlled by the system. A lanyard trip could be visually seen when driving past on the access road.



Lanyard strobes on the opposite side of the conveyor are not readily seen from the access road, the flexibility of the safety system allowed for the tailor modification of the strobes next to the road to flash at an alternate rate to indicate a tripped lanyard on the opposite side.