DISTRIBUTED CONTROL SYSTEM

OVERVIEW
INTRODUCTION

All equipment in DCS are working 24 hours to cover mill running. We have rack room in each area to process the data in that area. All rack room in each area is communicate each and other and we collect all data for all area in Central Control room.

The central control room is the place to control and monitor the mill by DCS operators. DCS operator can control and monitor all signal via consoles. The Signal from DCS operator or the signal from field will sent to rack room.

The rack room is central of Processing data from and to field for each area. The rack room also for collected all DCS modules, Multi Function Processor (MFP), I/O modules, communication modules, power supply module, etc.
DISTRIBUTED CONTROL SYSTEM (DCS)

PROCES CONTROL UNIT (PCU)

MFP

SLAVE EXPANDER BUS

A/I

A/O

DI

DO

TU

TU

TU

TU

UP TO 64 MODULES
DISTRIBUTED CONTROL SYSTEM (DCS)

What are advances of DCS for Industries

Interlocking System (Safety).
To avoid damage of the equipment and injure the people.

Man Power
Reduce man Power of the mill because DCS operator easy to control and monitor their plant.

Data
To collect data of each loop number if sometimes it is needed to analyst to help solve problem.
DISTRIBUTED CONTROL SYSTEM (DCS)

What are the consist of DCS

I. Hardware
Console/Computers
DCS MODULES
Cable

II. SOFTWARE
Process Control View (QNX, Database)
Batch90 Program
Jungle Mux
Harmony
Computer Load system (CLS)
Engineering Work Station (CAD, SODG)
Composer Program
DISTRIBUTED CONTROL SYSTEM (DCS)

HOW TO DCS WORK?
DISTRIBUTED CONTROL SYSTEM (DCS)

SCOPE OF DISTRIBUTED CONTROL SYSTEM

THE SCOPE OF DCS IN KIANI KERTAS IS AREA UNDER CONTROLLED BY DCS.

THE AREA INCLUDED: WATER INTAKE, WATER TREATMENT, EFFLUENT, LIME KILN, RECAUSTIZING, EVAPORATOR, RECAVERY BOILER, DEMIN PLANT, POWER BOILER, DIGESTER, WASHING, BLEACHING, CHEMICAL PLANT AND PULP MACHINE.

WE HAVE SIMULATOR TO SIMULATE PROCESS FOR EACH PLANT AND ALSO TRAINING FOR NEW OPERATOR.

DCS HAS INTERFACE TO HAVE PROCESS INFORMATION (PI)

DCS HAS INTERFACE WITH PLC
DISTRIBUTED CONTROL SYSTEM (DCS)
PT. KIANI KERTAS

INFI-NET
DCS HIGHWAY COMMUNICATION LOOP

POWER BOILER
RECOVERY BOILER
TURBINE
EVAPORATOR
WATER EFFlUENT
L. KILN RECAUST

DIGESTER
WASHING
BLEACHING
CHEMICAL
PULP MACHINE

MAIN CONTROL ROOM

PROCES INFORMATION
PI
STEP OF DCS SIGNALS

DCS OPERATOR
CLIENT

DCS OPERATOR
SERVER

ELECTRICAL

MCC

Rack Room

OTHERS SOURCE
EXP: HYDROIC

PUMP

INSTRUMENTATION

TRANSMITTER