INTERPLANT STANDARD — STEEL INDUSTRY

IP SS	SPECIFICATION FOR PROCESS OPERATOR'S CONSOLE	IPSS : 2-07-041-88
	CORRESPONDING INDIAN STANDARD DOES NOT EXIST	

0. Foreword

0.1 Interplant standardization activity in steel industry is being pursued under the aegis of the Bureau of Indian Standards (BIS) and the Steel Authority of India Limited (SAIL). This Interplant Standard prepared by the Standards Committee on Computerization and Automation, IPSS 2 : 7 was adopted by the Approval Committee on Design Parameters, IPSS 2, on 14 October 1988.

0.2 Interplant Standards on design parameters primarily aim at achieving rationalization and unification of parts and assemblies of process and auxiliary equipment used in steel plants and these are intended to provide guidance to the steel plant engineers, consultants and manufacturers in their design activities.

1. Scope — This standard covers the specification for process operator's console.

2. System Architect and Features

    a) Color CRT with operator's key board and engineer's key board;
    b) On line system generation/modification and down loading;
    c) Duplexing capability and redundant features;
    d) Page backward/forward facility;
    e) Screen hard copy;
    f) Key board features (soft keys) :
       i) Call-up keys,
       ii) Numerical key pad,
       iii) Option keys for dedicated software,
       iv) Controller operation key,
       v) Display of plant key,
       vi) Overview display key,
       vii) Group display key,
       viii) Point display key,
       ix) Process flow display key,
       x) Hard copy function key,
       xi) Tag searching key,
       xii) Alarm confirm key,
       xiii) Buzzer reset key, and
       xiv) Soft keys shall be available for status directories and trend directories;
    g) Capability to communicate over high speed data bus (1 MB or more);
    h) One line printer shall be facilitated for alarm logging and report generation purpose;
    j) Hard disk memory facility for keeping at least 30 days data for historical trending, and data logging purpose. Facility shall be there to retrieve these information after 30 days, transferring into floppy disk, and
    k) On line background auto alarming shall be continuously active regardless the current display operation on the screen.

3. Specification of Process Operator's Console for Smaller Systems

    a) 14 inches Color CRT   :   1 CRT per system
    b) Number of tags   :   512
    c) Number of control loops   :   128
    d) Plant overview   :   8 plants per screen, 1 screen per system

Amendments issued (to be filled up by the user department)			
No.	**Date of Issue**	**D. No:**	**Date of issue**
1		3	
2		4	

e) Tag name (alarm) (overview) : 8 groups of 8 tags per screen (64 tags) — 8 screens per system

f) Group : 8 controller face plates for screens per system

g) Points : One face plate (with controller parameters) per screen — 512 screens per system

h) Process graphics : 8 custom process graphics display per system

j) Real time trend : 4 points on one screen

k) Historical trend : 60 points at 1 minute interval for 24 hours

m) Alarms : Both process and device alarms shown in message area of screen

n) Operator's guide : Pre-established alarm recovery procedure messages

p) Printer : 3 printers, screen hard copy, event logging and report printing optional feature

q) Stepping through : Overview, group and point display, scrolling facility

r) Communication protocol : MAP/TOP

4. Specification of POC

a) High density, 16 color, 20 inches CRT with touch screen facility and operator's key board with option of 3 CRT per system.

b) Number of historical data points : 2 048 at each CRT.

c) Total number of tag names and associated information : 16 000 per system.

d) Plant overview : 16 plants per screen, 1 screen per system

e) Tag name (alarm) overview : 16 groups of 8 tags per screen — 16 screens per system.

f) Group : 8 controllers face plates per screen — 256 screens per system.

g) Points : Per CRT station, one face plate (with controller parameter) and analogue inputs/outputs, as well as group. Display of detailed parameters of loop or input/output XP, I & D Constant, alarm set point etc). Display of trend graph after calling up the point display.

h) Process graphics : 16 custom process graphics display per POC. Display of process flow graphics on process data and on/off information. Remote operation be executed by overlaying in a one-point display on the screen.

j) Real time trend : Display of 64 specified arbitrary trends — 8 trends per screen.

k) Historical trend : 2 048 historical trend data per system.

m) Alarm : Both process and device alarms shown in message area of screen, with other facilities like historical alarm display, latest alarm display, alarm summary display etc.

n) Operator's guidance display : Display of messages to the operator (alarm and operation guidance) in correspondence to the changes in the process for 128 items, 15 items per screen, 9 pages.

p) Facility of color hard copier and voice alarm unit

q) Facility of data base stations

r) Facility of gateway stations

s) Facility of redundancy of CRT display

t) Facility of screen switching, and

u) Facility for stepping through overview, point display and scrolling.