



# *Drift Tube QC Meeting*

*CMS meeting – CERN – 24<sup>th</sup> Sept. 2001*

- **Status of QC at various production sites**
- **Compoments**                      **Bologna/Protvino**
- **Torino**
- **Chamber**                              **Aachen**
- **Madrid**                      **Begona**
- **Padova**                      **Ezio**
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- **- Data Base status report**    **Simone**
- **- News on QC Document**
- **- AoB**



- **Current Version of the QC document**

- Version 6.2**

- **In the next version**

- Bar Code specific number for CERN production center will change from 10 to 12. Number 10 is assigned to Hexcel.
- Comments and changes suggested by Hans.
- Three new objects which may be identified with a Bar Code Label:
  - 1- Testpulse boards
  - 2- Feedthrough boards
  - 3- Slow control interface boardsMatteo has been asked and his opinion is NOT to identify these boards with ID numbers or "Batch" numbers, mainly because they are produced on one shot.

# *QC for AL Plates production*



24 Sept. 2001

CMS meeting, Silvia Maselli Torino



# *QC for AL Plates production*

## 1) Plate Cutting:

precision cutting < 300  $\mu$ m

diagonals < 1 mm

## 2) Strip Deposition

position  $\pm$  500  $\mu$ m

parallelism  $\pm$  200  $\mu$ m

## 3) HV test

Fast test 4.2 KV for 30 secs

Standard Test 4. KV for 30 min  $I < 10$  nA

## Operator Panel to Cut Plates and Deposit Strips

Interaction with: Torino/Dubna localAlPlateDB (write and read)

CLC programs via DDE server and digital I/O

Network (ftp servers in Torino and Dubna)

Image analysis program

PAW for analysis

# *QC for AL Plates production*

## Informations checked for QC

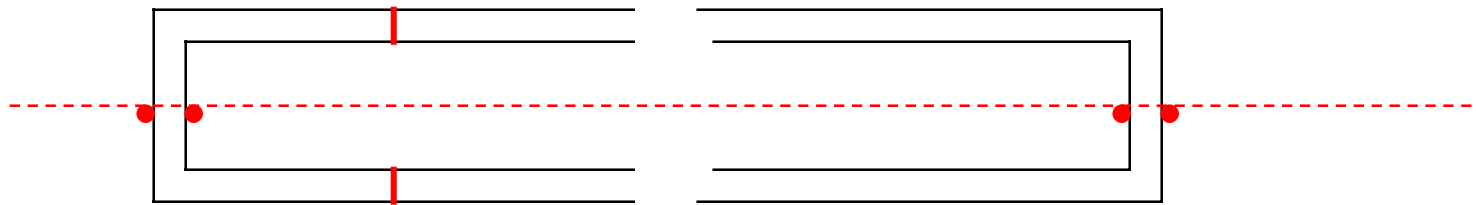
- Geometry of Plates
- Strip position

## Image Acquisition and Analysis

circa 100 images recorded each strip

resolution of 50  $\mu$ m

## Automatic procedure to identify bad strips



- LEFTMY = left min distance Al-My      - RIGHTMY = right min distance Al-My
- POSXMY = max residual of the My strip position wrt nominal position
- POSXAL = max residual of the Al strip position wrt nominal position
- YHVMY = My strip position HV side      - YHVAL = Al strip position HV side
- YFEMY = My strip position FE side      - YFEAL = Al strip position FE side



# *QC for AL Plates production*

QC Production Data Base will contain all relevant geometrical quantities of the plate (4 x,y position of the corners) and of the strips (all strips are recorded)

**Thanks to Simone effort**

## **During Production:**

Flow of the informations Torino / Dubna via ftp

Automatic transfer to Dubna of Local DB

Acquisition and analysis of data in Dubna

Automatic creation of Data Base ascii file

(automatic fill into Production DB?)

From Dubna to Torino via ftp (Traveler, raw data of images and DB file)