Cathode Production Status

CMS Week December 3rd 2002

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INFN Bologna

I-beam Lengths and Shipments for the Second 15 ton Extrusion

Ordered last October

| Length (mm) | Quantity | Boxes | Weight (kg) | Ready date |
|-------------|----------|-------|-------------|---------------|
| 2386 | 13860 | 15 | 3736.9 | 30/01/03 |
| 2045 | 5544 | 6 | 1281.1 | 30/01/03 |
| 3028 | 3696 | 4 | 1264.6 | 30/05/03 |
| 2386 | 9240 | 10 | 2491.3 | 30/05/03 |
| 1996 | 4620 | 5 | 1042.0 | 30/05/03 |
| 2508 | 924 | 1 | 261.9 | 30/09/03 |
| 2386 | 18480 | 20 | 4982.5 | 30/09/03 |
| Total | 56364 | | 15060.3 | |



This ~fulfills the I-beam production (apart for spares)

- ➤ Cathode production at Protvino is progressing well.
- ➤ 200 cathodes/plotters are produced on regular basis with a normal 8 to 16 shift.
- ➤ Production was maintained in spite of a breakdown of Plotter 1 by going double shift with Plotter 2.
- ➤HV test is a critical item, 2 test runs/day including weekends. Some slowdowns due to modules repair (too much dust/ HV discharges) and problems in shipping back (DHL, Air Freight...)
- ➤ Documentation of QC tests is non existent. It is important to do a visual inspection on as many cathodes as feasible and to keep track of cathode failures.

Planned Shipments up to December 2003

| Nr | Date | PHI | MB1 | MB2 | MB3 | CUT | Boxes | Cathodes. |
|----|----------|-----|-----|-----|-----|-----|-------|-----------|
| 3 | 11/03/2 | 9 | 2 | 1 | 0 | 0 | 12 | 11378 |
| 4 | 13/05/2 | 9 | 1 | 1 | 1 | 0 | 12 | 11316 |
| 5 | 15/07/2 | 7 | 1 | 1 | 3 | 0 | 12 | 11316 |
| 6 | 28/10/2 | 7 | 2 | 2 | 1 | 0 | 12 | 11316 |
| 7 | 20/12/02 | 8 | 1 | 2 | 1 | 0 | 12 | 11316 |
| 8 | 08/03/03 | 10 | 2 | 0 | 0 | 0 | 12 | 11316 |
| 9 | 25/04/03 | 9 | 0 | 1 | 2 | 0 | 12 | 11316 |
| 10 | 08/07/03 | 10 | ~ | 1 | 0 | 0 | 12 | 11316 |
| 11 | 08/08/03 | 9 | 1 | 1 | 1 | 0 | 12 | 11316 |
| 12 | 09/09/03 | 7 | 0 | 0 | 0 | 5 | 12 | 11316 |
| 13 | 28/10/03 | 9 | 1 | 1 | 1 | 0 | 12 | 11316 |
| 14 | 09/12/03 | 9 | 1 | 1 | 1 | 0 | 12 | 11316 |
| | | 103 | 13 | 12 | 11 | 5 | 144 | 135854 |

Shipment 6 was delayed by expiration of a tax exemption agreement. Yesterday it was blocked at the border with Poland by the sudden realization that N in CERN stands for Nuclear...

a suivre

The Current shipment to be subdivided as follows:

- Aachen: 2 boxes Phi and 2 boxes Theta
- Legnaro: 3 boxes Phi and 1 box Theta
- CIEMAT: 2 boxes Phi and 2 boxes Theta

The cathodes will be shipped to the sites in January 03, if possible use the return trip of the DT transport truck.

9 boxes ready for Shipment 7 (+ 2 boxes of Phi cathodes), still missing 1MB3 and 2 MB1 boxes, on schedule.

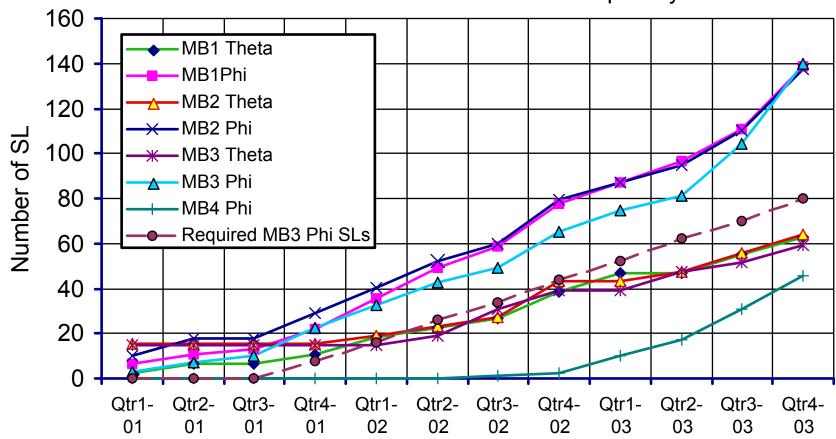
Umberto visited Dubna and IHEP at the beginning of November.

He was very impressed by the cathode assembly work:

"Cathode production is a very important project for CMS, it has the full support of the INFN"

| Grand Total | Aachen | u, | CIEMAT | IAT | Legnaro | ar0 | Torino |
|--------------------|--------|-------|--------|------------|----------|-------|--------|
| | Θ | Ф | ① | Ф | (| Ф | Ф |
| 05-Nov-2001 18076 | 1459 | 2575 | 3528 | 4260 | 3413 | 2841 | 0 |
| Nr. of SL | 9 | 12 | 15 | 17 | 14 | 6 | |
| 30-Nov-2001 27191 | 2449 | 4375 | 3528 | 0969 | 3413 | 6466 | 0 |
| Nr. of SL | 10 | 21 | 15 | 28 | 14 | 22 | |
| 19-Apr-2002 38365 | 4247 | 7065 | 4430 | 9730 | 3413 | 9480 | 0 |
| Nr. of SL | 18 | 35 | 19 | 40 | 14 | 32 | |
| 06-June-2002 49640 | 5190 | 9853 | 5373 | 12559 | 4356 | 12309 | 0 |
| Nr. of SL | 22 | 49 | 23 | 51 | 18 | 42 | |
| 29-Aug-2002 60546 | 6133 | 11739 | 6316 | 14445 | 7185 | 14195 | 533 |
| Nr. of SL | 26 | 58 | 27 | 59 | 30 | 48 | |
| xx-Oct-2002 71862 | 8019 | 13625 | 8202 | 16331 | 8128 | 17024 | 533 |
| Nr. of SL | 34 | 89 | 35 | <i>L</i> 9 | 35 | 58 | 1 |
| xx-Dec-2002 83588 | 8962 | 15511 | 10088 | 19160 | 9071 | 19853 | 233 |
| Nr. of SL | 38 | 11 | 43 | 79 | 39 | 89 | 1 |

Delivered Cathodes as Number of SuperLayers





Almost finished by the end of next year