

Émetteur : JM LARDON

Date : 3/06/10

Direction / service : DT/TA

Réf.

Date de la réunion : 2/06/10

Participants : JM LARDON – F.BARBE

Lieu : PARIS

Destinataire(s) Participants AD + réseau monde

Copie(s) JP HESSE – M. GRAGLIA – A.TRONCHE

Objet : ITER

Objectives of meeting :

The meeting was organized by C2I and FRANCE ILO (S.PORTIER) with active support of AREVA and CEA. Objectives were to sum up previous meeting held on 19/05 in Barcelona (see report of Esteban PEREZ) and give to attending companies the latest technical informations relatives to the blanket system .

AREVA was represented by B.BIELAK (vacuum vessel) and I.BOBIN (Blanket). P.BUCCI was the CEA representative.

Other companies which attended were SEIV (Eng.) , ATMOSTAT (Machining Be), CNIM ,CETIM , SAGEM , Bronze Industrie (alloy Cu-Cr-Zr) , IS , SDMS (Eng.) .

Review of Barcelona meeting – Main information :

The planning for first plasma has not been changed (2018) though it will be an hydrogen plasma and not De-Tr plasma, as the first wall will not be assembled at that time !

21 companies were attending . four companies were presented as first rank supplier : AREVA (FR), AMEC (UK), COSWORTH (UK) and SIMIC (Italy) (for vacuum vessel). Take contact (see document enclosed "MAPPING BLANKET Final.xls"). Action M Proctor, A Balzarotti.



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The sharing of activities for ITER has been changed.

Blanket First Wall Panel or Primary wall (= composed of Be tiles, Cu Cr Zr + D12mm 1mm thick tubes in 316L IG, 316L IG fingers, 316LIG central manifold) : 50% EU, 40% RF, 10% CN.

The first prototype (development and tests) has been done by CEA (with 60% of the price on own funds) and AREVA. Bodycote has a major position on this project.

The primary wall design is still not definitely approved. Due to higher thermal fluxes than expected in some area of the reactor (greater than 2MW/m²) the blanket design has been changed. That does not concern AD since we are not interested any more in Hipping operations. The only part of interest is the 316LN-IG collector manifold

(Dimensions 1m x 0,6m x 80mm) which could be manufactured from plates or from welded and machined blocks (due to many cooling channels inside the blocks).

For blanket the planning is as follows :

- Semi-Prototype in 2010 – 2011
- Full scale prototype and testing : 2011 – 2013
- Start of Industrial manufacture : End 2013
- First serie : 2014
- Serial production : start 2015

Blanket Shield

It is composed of shield blocks (1,5 m x 1 m x 0,8 m) . The sharing of activities have been changed. Now the sharing is as follows : 50% CN – 50% KO

Blanket Shield blocks are the first topic of interest of AD.

The total amount is 500 blocks (250 in China).

The bad new for AD is that the shield block could not be manufactured according to RCCM-R though the decision is not made yet as ITER Org and F4E disagree on the design.

Action : Identify first rank supplier via Domestic agencies and try to have inquiries. Contact with domestic agencies could be done via UBIFRANCE network (see contact of UBIFRANCE in attached document). Action M Graglia / H Ma / Han Chull Cho



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Information on Vacuum vessel :

Several first rank suppliers have given up quotation for ITER due to disagreement on "liquidated damages" or other general requirements of F4E. Thus CNIM (associated with an Italian manufacturer) and Davy Markham gave up for these reasons. G&G international in NL has given up because product is too small. For the vacuum vessel only two consortium remain (AD already quoted some parts for one of them AREVA-ENSA-DCNS-MAN consortium).

Some problems also arose for Intellectual Property which are currently discussed at a high level with ITER Org.

Conclusions :

The meeting was only devoted to the shield module.

The main information given at this meeting is the confirmation of the manufacture of shield blocks in China and Korea. Those represent the highest potential for AD for the shield modules (shield blocks + first wall panel).

Identify potential actors in China and Korea is then a priority if we want to be involved in the business.

US team has to take contact with US Domestic agency and identify the potential for AD via UBIFRANCE network.