

DEVELOPMENT OF ISOTOPE SEPARATION SYSTEM AND WATER DETRITIATION SYSTEM IN THE FRAME OF THE TRITIUM PLANT CONSORTIUM OF ASSOCIATES

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With the constitution of the European Joint Undertaking for ITER (hereafter referred to as Fusion for Energy /F4E) and the development of fusion energy, it has been established that for the construction of the ITER fusion machine, the contracts have to be concluded between F4E and any contractor, in order to obtain the supply of assets, services or, the execution of work necessary for carrying out its activities.

In this regard, F4E constitutes the Euratom domestic agency for ITER and it is in charge to provide to ITER, components, equipment, materials and other resources useful to the ITER Organisation (IO) as well as, to manage procurement arrangements vis-à-vis the IO.

In order to constitute a strategic organisational collaboration covering a broad area of expertise relating to fusion research, four European Associations, namely CEA, ENEA, KIT and MedC/ICIT, concluded an Consortium Agreement for a close collaboration related to their contribution to the ITER Tritium Plant System. The Tritium Plant Consortium of Associates (TriPla-CA) aims to join their efforts, in order to provide appropriate proposals to F4E contributing as widely as possible to the realisation and the success of the ITER Tritium Plant system especially regarding the European procurement sharing related to Isotope Separation System (ISS) and Water Detritiation System (WDS).

Within this frame the TriPla-CA has been granted with 3 grants/contracts so far related to Research and Development of ISS and WDS. This paper will give an overview of the TriPla-CA agreement as well as it will describe the development of ISS and WDS, undertaken over the recent past at the Tritium Laboratory Karlsruhe (TLK).