

Press Release

FOR IMMEDIATE RELEASE



Route de Vinon-sur-Verdon CS 90 046 B3067 Saint-Paul-lez-Durance Cedex France

Comment:

Laban Coblentz

Laban.coblentz@iter.org

+33 4 42 17 66 17

First machine components reach ITER

SAINT-PAUL-LEZ-DURANCE, France (22 December 2015). In December, the first 12 segments of the massive ITER cryostat were delivered to the ITER site in France. The cryostat, the vacuum-tight container that will surround the main plasma chamber and superconducting magnets, is under the procurement responsibility of the ITER-India Domestic Agency (www.iter-india.org) and manufactured by the Indian industrial giant Larsen & Toubro Ltd. The arrival of the cryostat segments represents a double milestone for the ITER Project—the arrival of the first elements that will be integrated into the ITER machine, and the ahead-of-schedule achievement of the first project milestone validated by the ITER Council in November for the years 2016-2017.

china The ITER cryostat will be shipped from India in 54 separate segments, to be assembled and welded in the on-site Cryostat Workshop. The first 12 segments that reached ITER in December include six 50-ton 60° segments, and six 19-ton main shell segments. Together these segments, which will form Tier 1 of the cryostat base section, represent only 1/8th of the total mass of the 3,850-ton cryostat—the largest, most complex steel vacuum chamber ever built.

eu
india
japan
korea
ruussia The ITER cryostat will act as a “thermos” to maintain the ultra-cold temperature of the superconducting magnets and will provide structural support as well as access to the vacuum vessel and magnet systems.

usa The ahead-of-schedule delivery of these first machine components, originally scheduled for the first quarter of 2016, also marks the completion of the first milestone validated by the ITER Council during its November meeting for the years 2016-2017.

“We can celebrate a great accomplishment, one that is the fruit of remarkably integrated work and coordinated effort and that represents the first milestone of the new proposed Baseline,” said ITER Director-General Bernard Bigot. “Collaboration forms the core of our common project and the first condition of our success. In approaching ITER as one project, whose challenges and rewards are shared by all, I am convinced that we are now on the right track to ITER success.”

In a few months, Tier 2 of the cryostat base will be delivered, followed by the first tier of the lower cylinder. The complete base section—1,250 tons—will be the single largest load of ITER Tokamak assembly; the other three cryostat sections (lower cylinder, upper cylinder and top lid) weigh in the range of 600-800 tons each. By the summer of 2016, welding operations will begin in the dedicated 5,500-square-metre Cryostat Workshop on the ITER site.

BACKGROUND TO THE PRESS RELEASE

ITER—designed to demonstrate the scientific and technological feasibility of fusion power—will be the world's largest experimental fusion facility. Fusion is the process that powers the sun and the stars:



when light atomic nuclei fuse together to form heavier ones, a large amount of energy is released. Fusion research is aimed at developing a safe, abundant and environmentally responsible energy source.

ITER is also a first-of-a-kind global collaboration. Europe will contribute almost half of the costs of its construction, while the other six Members to this joint international venture (China, India, Japan, the Republic of Korea, the Russian Federation and the USA), will contribute equally to the rest. The ITER Project is under construction in Saint-Paul-lez-Durance, in the south of France.

For more information on the ITER Project, visit: <http://www.iter.org/>