

## **EADS / NTiC Technology Cooperation Agreement - Executive Summary**

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**1. Background:** Norsk Titanium Components AS (NTiC) was established in 2006 and is a subsidiary of Scatec, Norway's leading materials technology investor.

NTiC was established to serve the expanding market for advanced titanium components, with complex geometries. NTiC has developed a proprietary Plasma Transfer Arc (PTA) metal deposition technology to produce near net shape titanium components.

**2. Technology:** NTiC's technology consists of only two major processing steps:

- i. Production of titanium wire directly from titanium sponge;
- ii. Production of near net shape titanium components directly from titanium wire;

**3. Cooperation description:** since 2006 EADS has actively been engaged with NTiC to understand the potential of such advanced production methods and technologies. EADS considers NTiC has a potentially interesting and market leading technology and expresses interest for the potential offered by NTiC technology, enabling optimized manufacturing process for titanium components. These components are strategic in the next generation of EADS products such as civil and military aircraft, helicopter, satellite, UAV, missile, which will incorporate more light and robust materials as well as composite-based structures.

However, being still at very early stage of development, qualification and application process, NTiC has a number of significant barriers or Technology Readiness Levels to overcome before the technology can be accepted and qualified according to aerospace and defence standards. EADS, as a result of its market position and technology leadership is proposing to enter into a **cooperation agreement** with NTiC to assist its process and product development up to maturity level to enter qualification process for aerospace and defence products. For EADS, this cooperation is also developed in order to create a long term partnership with the Norwegian industry in a strategic area promoted by the Norwegian Authorities.

**4. Cooperation benefits to NTiC:** the primary benefit is that NTiC will have a unique opportunity to develop its processes and technology with a world leading aerospace and defence company. NTiC main target market is the aerospace and defence markets. However, barriers to entry are very significant. The Technology Cooperation Agreement with EADS will be therefore an excellent leverage for NTiC into future business opportunities on aerospace and defence markets.

**5. Cooperation Benefits to Norwegian Defence Industry:** Norway will benefit from the Technology Cooperation Agreement between NTiC and EADS in the following ways:

- i. The cooperation aims at creating a world leading materials technology in Norway;
- ii. The Defence industry will benefit from local production of high quality, low price titanium components;
- iii. A national competency in near net shape titanium manufacturing will bring significant benefits to the overall Norwegian industry in various market segments (aerospace and defence; oil and gas; mining and other industries ...)
- iv. The R&D and added value is located in Norway with early involvement of other Norwegian R&D organisations such as SINTEF and NTNU
- v. The roll-out of NTiC will stimulate significant purchases of equipment and infrastructure in Norway and also important jobs creation.