Annex 1 - Technical specifications

Topics of particular interest for the 1st open call

When evaluating the received applications against the criterion "**Relevance**", particular attention will be given to the *Coherence of the proposed project with the DeremCo vision and DeremCo partners' business objectives*. The proposals are expected to address the following topics:

Topic 1 (Process) - Prototype of an add-on system to improve the crushing and/or shredding processes for composite materials (thermoset matrix). In particular, hermetic systems for dust capture, shearing/tearing systems. Proposed **solutions** are expected **to reduce the amount of dust of at least 10% compared to current systems**. The prototype of the proposed solution can be tested on a production line made available by the project partners. Experience of applicants in mechanical recycling of polymers and composites will be considered as an added value.

Topic 2 (Output) - Prototypes of **innovative products realized by Large Format Additive Manufacturing** (LFAM) using compounds produced by the DeremCo project innovative solutions can be a component, tool, furniture, part of a bigger application, etc. A limited amount of DeremCo material will be made available for tests. Advice and know how on 3d printing process and design for additive manufacturing will be made available by project partners**.** Knowledge of additive manufacturing and availability of 3D printing processes from applicants will be considered as an added value. The proposed **products should include at least 20% of recycled materials from Fiber Reinforced Polymers** (thermoplastic matrix).

Topic 3 (Output) – Prototypes of **new applications using the hybrid yarn produced within DeremCo**. Applications targeting the nautical, furniture and automotive sectors will be given priority. Knowledge about the hybrid yarn as well as a limited amount of sample hybrid yarn will be made available to applicants by the project partners.

Topic 4 (Process) – Prototypes of **novel technologies/strategies to improve the testing process** and life-time characterization of the DeremCo products made of variable quantities of recycled fibers/granules. The proposed solutions are expected to reduce time and costs if compared to traditional testing technologies/strategies of at least 15%.

Topic 5 (Output) – Prototypes/small sample of **new products using the recycled Bulk Moulding Compounds** (r-BMC) produced within DeremCo. The DeremCo consortium would make available to applicants:

- short training on the r-BMC, its variations and properties achievable on moulded components;
- moulded samples with different r-BMC formulations produced during DeremCo;
- advice the design of the new products for a better use of the r-BMC;
- advice on how to design and produce a mould for the transformation of thermosetting materials.

Topic 6 (Output) – Prototypes/small sample of **new products manufactured using injection moulding with DeremCo materials**. A limited amount of material will be made available to applicants for their projects. Applications including new **products in industries different from automotive will be prioritized**. Facilities for injection moulding will be made available to applicants by the DeremCo partners.

Topic 7 (Input) – **New typologies of waste materials based on natural fibres to be recycled**. Facilities of DeremCo partners will be made available to applicants for validation. Availability of the waste materials for testing is considered an asset.