

Project Title: **Pre-normative research on resistance to mechanical impact of composite overwrapped pressure vessels**

Project acronym: **HyPactor**

Instrument: **171 - Article 171 of the Treaty**

Thematic Priority: **SP1-JTI-FCH.2013.5.6**

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# HYPACTOR

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<b>DELIVERABLE ID</b>	<b>D4.5</b>
<b>Deliverable name</b>	<b>Definition of AE trial plan</b>
<b>Lead beneficiary</b>	CEA & WRUT
<b>Contributors</b>	CEA, AL, HEX, ISA, WRUT,

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## 1. Executive summary

### 1.1. Description of the deliverable content and purpose

This deliverable details the AE trial plan defined by the partners in order to collect AE data recorded during the WP2 and WP3 test matrix.

This test matrix is divided into two steps:

- 1) Evaluation of the AE signature of healthy vessels to define a baseline.
- 2) Application of the AE trial plan for WP2 step2 and WP3.

The aim of this work is to collect reliable AE data to define pass-fail criteria.

### 1.2. Deviation from objectives, corrective action

N.A.

### 1.3. Technical progress

One technical meeting have been organized on 2015/06/24 with ISA and AL to propose a first version of AE trial plan to partners and then this topic was also discussed and validated during the workshop of the M18 meeting.

### 1.4. Impact of the results

Task T4.4 is conducted according to the test matrix of WP2 step 2 & WP3.

The vessels impacted in WP2 step 2 & WP3 will be analysed using tomography and ultrasonic testing in order to characterize the damage and then pressurized and monitored by AE according to the AE trial plan.

All the AE recorded data, collected by partners will be sent to ISA in order to perform multiparameter analysis approach to define pass-fail criteria.

### 1.5. Dissemination activities

#### 1.5.1. Publishable summary of the deliverable

In order to define pass-fail criteria in terms of tolerance to damage of composite pressure vessels, an AE trial plan has been built with all the HYPACTOR partners and will applied on the test matrix of WP2 step2 and WP3. AE test will be applied according to the procedure defined in the deliverable D4.4.

#### 1.5.2. Dissemination activities

N.A.