Organisation intergouvernementale pour les transports internationaux ferroviaires
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr
Intergovernmental Organisation for International Carriage by Rail

INF. 16

29 May 2018

(English only)

RID: **9th Session of the RID Committee of Experts' standing working group**
(Berne, 28 - 30 May 2018)

Subject: **Risk assessment for extra-large tank-containers**

Presentation of the representative of CEFIC

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Risk assessment

BASF Class Tank Container

First Report to RID Committee

May 29th, 2018

Procedure & Content

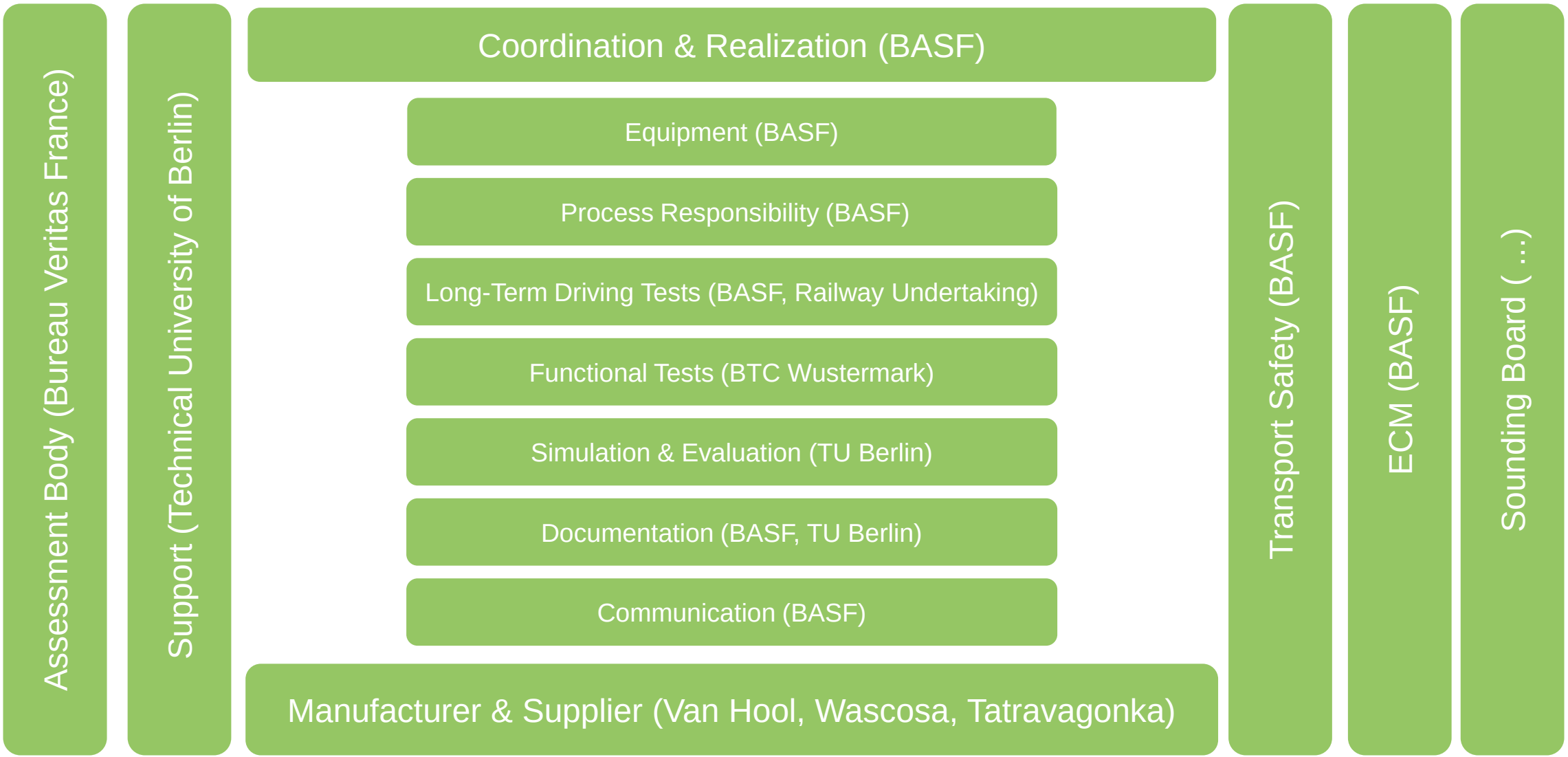
Procedure

- Assessment in accordance with (EU) 402/2013 and comparative risk analyses in accordance with CSM process
  - Container carrying wagon (CRC) & tank container (combined transport)
  - Rail tank car (material references) (RTC)
- Evaluation of our fleet of RTC (material & wall thickness)
- Practical test drives & crash tests
- Examination of the impact of the requirements for rail

Content

- Tank container / container carrying wagon as entire system
- Connection between TC and CRC (spigot CRC, corner fitting TC, other significant sub-systems)
- Entire system in case of incident
  - irregular collision shock
  - Partial loading
  - Behaviors in case of overriding of buffers and derailment (TC & CRC, RTC)

Organization



Milestones

Start of the project:	first of May 2018
First report to RID committee:	May 29th, 2018
Long term tests:	July – December 2018
Tests at the testing yard (including crash tests):	June – July 2018
Second report to RID committee about the tests:	November 2018
Simulation and calculation:	August – December 2018
Report:	December 2018 – March 2019
Proposal’s to the RID Committee:	May/June 2019

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Work packages (in supervision with assessment body)

- System definition
- Significance check
- Long-term tests
- System comparison (B-TC, conventional rail system, combined rail system) by documents (permits, requirements...)
- Risk analysis
- Tests at the testing yard including crash tests
- Simulation of the whole system B-TC & carrying rail car
- Creation of a finite element analysis
- Valuation of the results
- Assessment & final report

BASF Class Tankcontainer (B-TC)

- Approved by Dangerous goods legislation (ADR/RID)
- Different standardized tank container types depending on purpose of usage from 53.000 to 73.500 l, high payload up to 67 tons
- For rail transport linked to new developed rail carrying wagon
- B-TCs are cranable and stackable (max 6)

Rail tank car
up to 95.000 l
67 t tons payload

B-TC
up to 73.500 l
67 tons payload

Standard tank container
23.000 – 43.000 l
up to 39 t payload

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Carrying wagon for rail transport of B-TC units

Marshalling yard (Hump)	possible
Noise	78 dB (Disc brake) 80 dB (K-brake)
Length	15.15 m (45’) – 17.80 m (54‘)
Weight	16.0 to 16.5 tons
Height	1.10 m (G1)

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Risk assessment

Normative requirements

- 2004/49/EG
- (EU)- VO 402/2013 common safety method for risk evaluation and assessment
- (EU) 2015/1136 changes (EU) 402/2013
- (EU) 321/2013 TSI WAG
- EN 12663-2 railway applications – structural requirements of railway vehicle bodies – part 2: freight waggons
- RID capture 6.8
- UIC 592