

GlassTrend



GlassTrend GT 37

**Refractory corrosion under hydrogen
firing atmosphere (SLS-glass)**

Sjoerd Stelwagen



22 participants



ArdaghGlassPackaging





Main goal

Design and build an experimental setup to simulate the corrosion of refractory materials in an atmosphere resulting from the combustion of natural gas or hydrogen with oxygen or air.



Project objectives

1. Build-up knowhow to understand the mechanism of refractory corrosion based on:
 1. Literature review
 2. Thermodynamic simulations
 3. Information from suppliers and glass industry
 4. Results of the accelerated corrosion tests



2. Design and build an experimental setup to simulate the corrosion of refractory materials
 1. atmosphere resulting from the combustion of NG or H₂ with O₂ or air
 2. chemical reactive species: S and Na
 3. two temperature regimes (superstructure corrosion, regenerator corrosion)



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3. Execution of a series of accelerated refractory corrosion tests

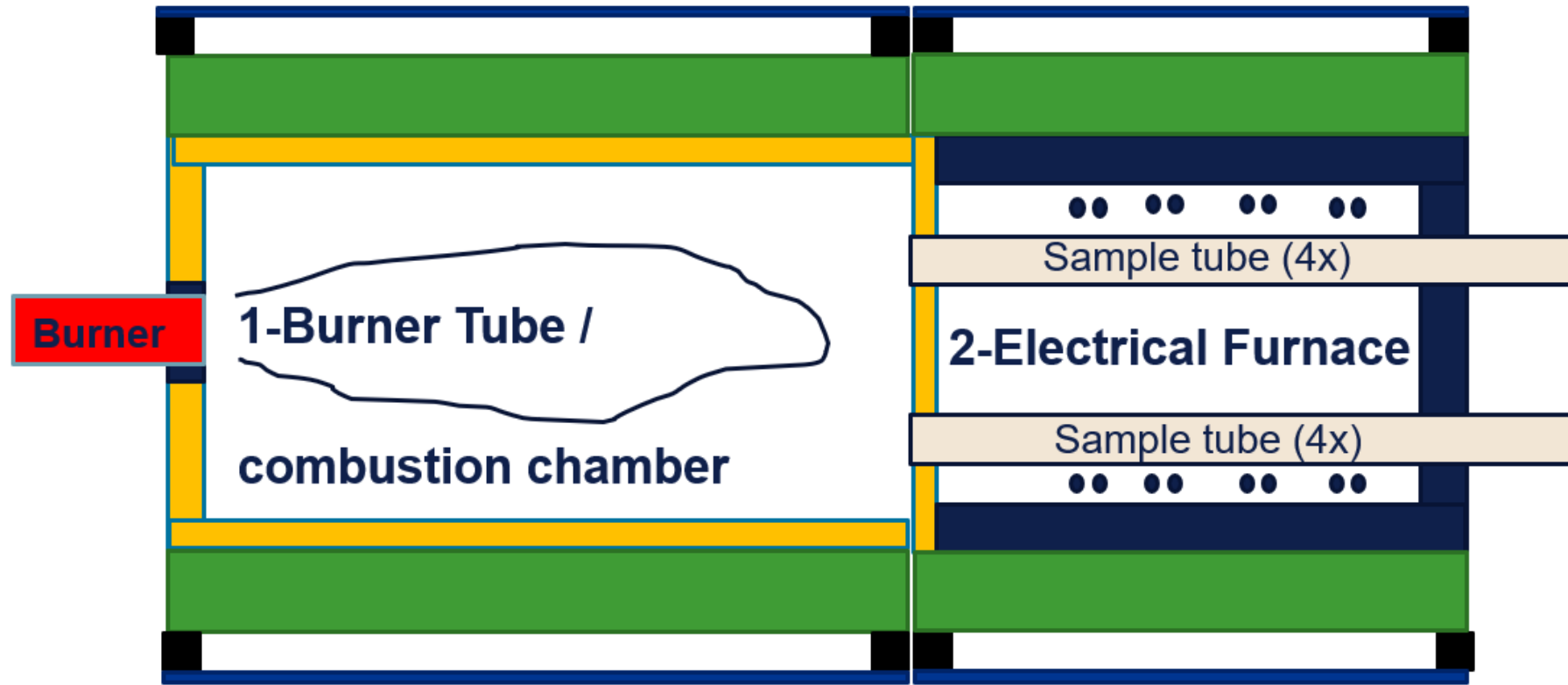


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Test set-up





Actual setup



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