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## **C2Po1F-02 [32]: Entropy analysis of support systems in multi-channel cryogenic lines**

*Tuesday, July 23, 2019 9:00 AM (2 hours)*

This work describes the methods for transporting cryogenics through single- or multichannel pipelines. It also presents examples of the use of cryogenic lines and of their designs, referring in detail to typical structural nodes found in cryogenic pipelines. The second principle of dynamics and the Gouy-Stodola theorem are discussed from the perspective of their application in optimizing and evaluating heat and mass transfer devices. The next part of the work presents the internal structure of the selected 100 m multi-channel cryogenic pipeline. Several variants of the method of supporting process pipes have been presented. For each of the solutions, an entropy analysis was carried out in order to select the best design in terms of the entropy generated in the process pipes.

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