Inprocess Technology & Consulting Group, S.L.
Gran Via de Carles III, 86 · 9è · E-08028 BARCELONA (Spain)
www.inprocessgroup.com

TC-SS03: FLARE SYSTEM MODELLING

OBJECTIVES

Learn the fundamental flare network modeling techniques for pipeline design. Learn the basics for rating a flare convergent, divergent and looped network for the constraint violations (Mach number, MABP, Noise, velocity, RhoV2) and for pressure, temperature and flow profile throughout the network. Understand the solver messages to analyze the flow network problems and review options to take corrective measures. Review results to perform process safety studies for pressure and temperature beyond allowable range as well as erosion problems for healthiness of the flow network in the real plant. Review flare network simulation computation convergence problems and examine solver solution methods.

PARTICIPANTS

The course is intended for engineers modelling flare systems and equipment and who need training to model flow networks.

CONTENTS

The course contents have been developed to allow designers to understand the way in which Flare Systems simulators work when designing, rating or de-bottlenecking flare systems. By the end of the course, attendees will be able to develop network models for convergent, divergent and looped systems.

ONE-DAY COURSE AGENDA

MODULE	MODULE TITLE AND SHORT DESCRIPTION	TIME	DAY
1	INTRODUCTION TO THE SIMULATOR Overview of software capabilities as the tool to be used in the design of new flare networks, revamping of existing ones and to debottleneck them when new units are added to the network.	1 hour	Day 1
2	DESIGN OF FLARE NETWORKS Efficient use of the software. Flare networks design analysis. Networks optimization.	1 hour	
3	DESIGN OF A NEW SYSTEM OF FLARE NETWORK Initial simplified design of a flare network system. Rigorous simulation of the initially proposed design. Elimination of possible network restrictions.	1 hour	
4	MODIFYING AN EXISTING DESIGN Adding a new producing plant in an off-shore field to the already existing flare network. Analysis of the limitations and of the proposed solutions.	1 hour	
5	USE OF THE IMPORT/EXPORT CAPABILITIES In order to be able to reuse part of a pre-existing design or the whole of it, it is necessary to know all the tool capabilities to import and export the data existing in files.	2 hours	