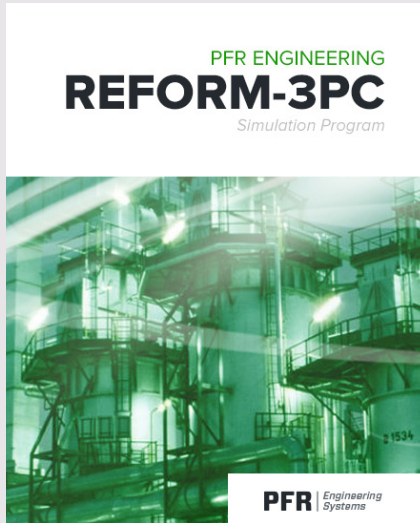


REFORM-3PC

Furnace Simulation Software

PFR Engineering Systems



REFORM-3PC is a specialized computer program for Steam Hydrocarbon Reforming Furnace simulation. It is used around the world by the leading petroleum refining, engineering construction, petrochemical and catalyst manufacturing firms.

REFORM-3PC performs a comprehensive, simultaneous heat and material balance between the combustion and process sides of Reforming Furnace firebox tubes. This includes rigorous stepwise reaction kinetics for steam reforming and combustion reactions, resulting in complete process temperature and composition profiles along the tubes.

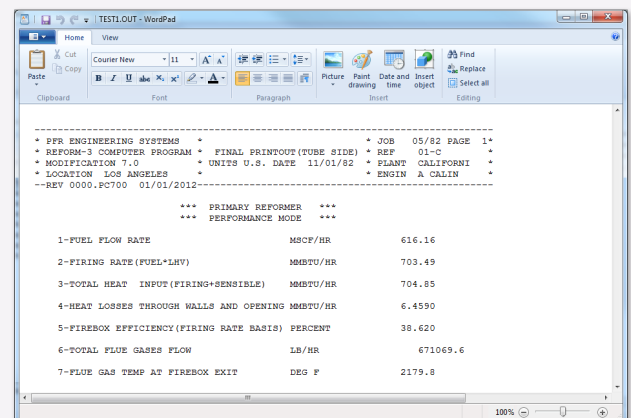
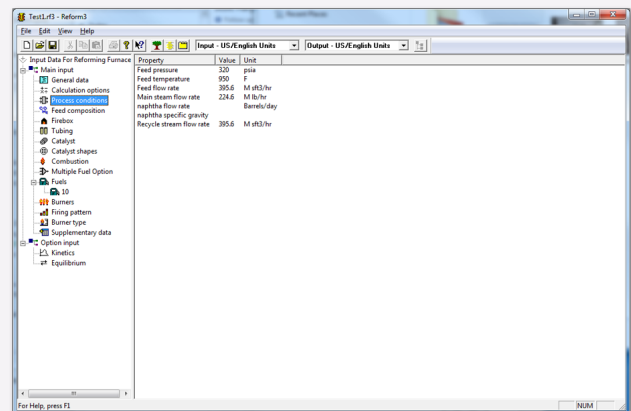
REFORM-3PC has been used successfully for over 15 years and is continually updated to reflect improved technology, field experience, and user-requested enhancements.

✓ Furnace Rating/Optimization

- Decreased Fuel Usage
- Extend Tube Life
- Evaluate Process Variable Changes
- Evaluate Fuel/Firing/Burner Changes
- Determine Efficiency and Heat Flux Profiles
- Monitor Catalyst Activity
- Evaluate Firebox/Tube Modifications
- Optimize Steam/Recycle Flows
- HAZOP/Benchmarking Tool

✓ Furnace Designs

- Perform/Check/Compare Designs
- Rate Alternative Operations
- Check Variations to Specs
- Check Burner Types/Locations
- Evaluate Proposed Catalysts
- Develop Process Control Algorithms



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User-friendly Input System

The system contains graphic input screens and on-line help functions with automatic default values for the most common heater configurations.

REFORM-3PC has built-in component property tables for feeds and fuel gases. The program features international and US/English unit systems for input and output.

- Up to 240 Increments per Tube
- Circumferential and Longitudinal Tube Wall Temperature Profiles
- Stepwise Iterations
- Up, Down, Side Fired and Terrace Wall Configurations
- Model Any Catalyst Shape or Size
- Optional User-Supplied Kinetics
- Performance Rating or Thermodynamic Prediction Modes
- Temperatures of all Gas Volumes and Refractory Zones
- Two Different Catalysts and/or a “No Reaction” Zone in each tube
- Gas or Liquid Fuels

PFR Engineering Systems, producer of the world-renowned Fired Heater simulation programs FRNC-5PC and REFORM-3PC.

PFR's software is used in the Petroleum, Petrochemical and Power industries around the world to evaluate thermal equipment such as fired heaters, boilers, heat exchangers and heat recovery systems.

Our programs are used by engineers in refineries and chemical plants, engineering companies and thermal equipment manufacturers.

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