

CFB Erosion: Introduction

CPFD Software

www.cpfd-software.com

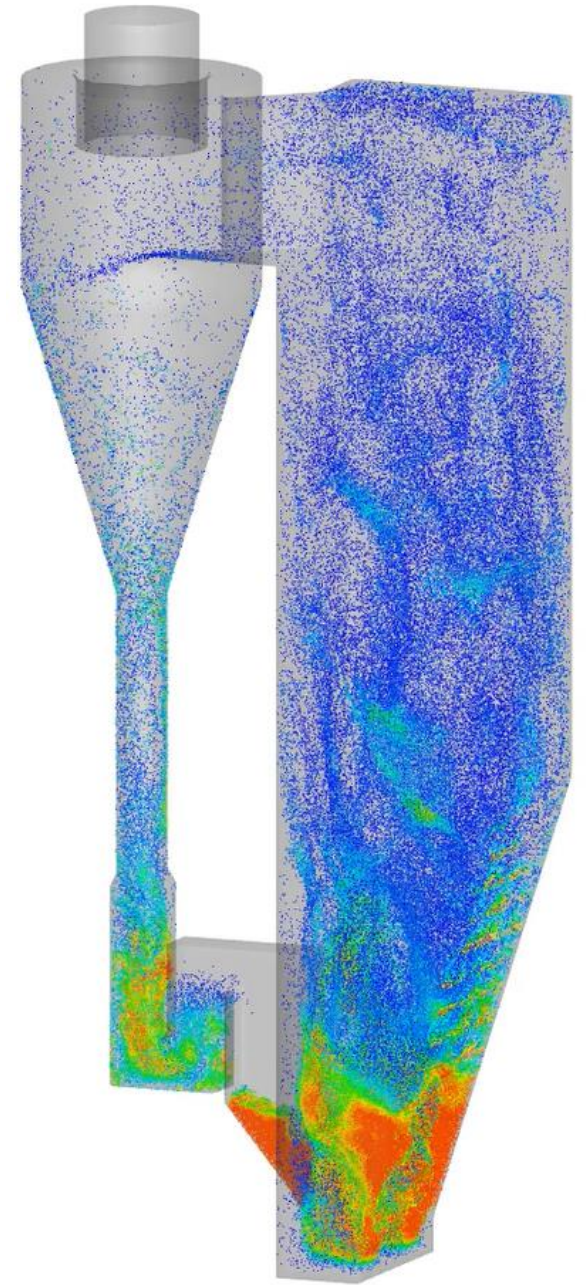
Overview

This example shows how to setup and run a circulating fluidized bed (CFB) simulation. Two cases of the model are run to compare erosion and cyclone efficiency:

- Case 1: baseline
- Case 2: modified geometry with larger cyclone inlet width

Video of simulation from paper coauthored by Biomasse Italia and CPFD:

<https://cpfd-software.com/cfb-combustor-3d-cfd-simulation-in-cpfd-barracuda-vr/>

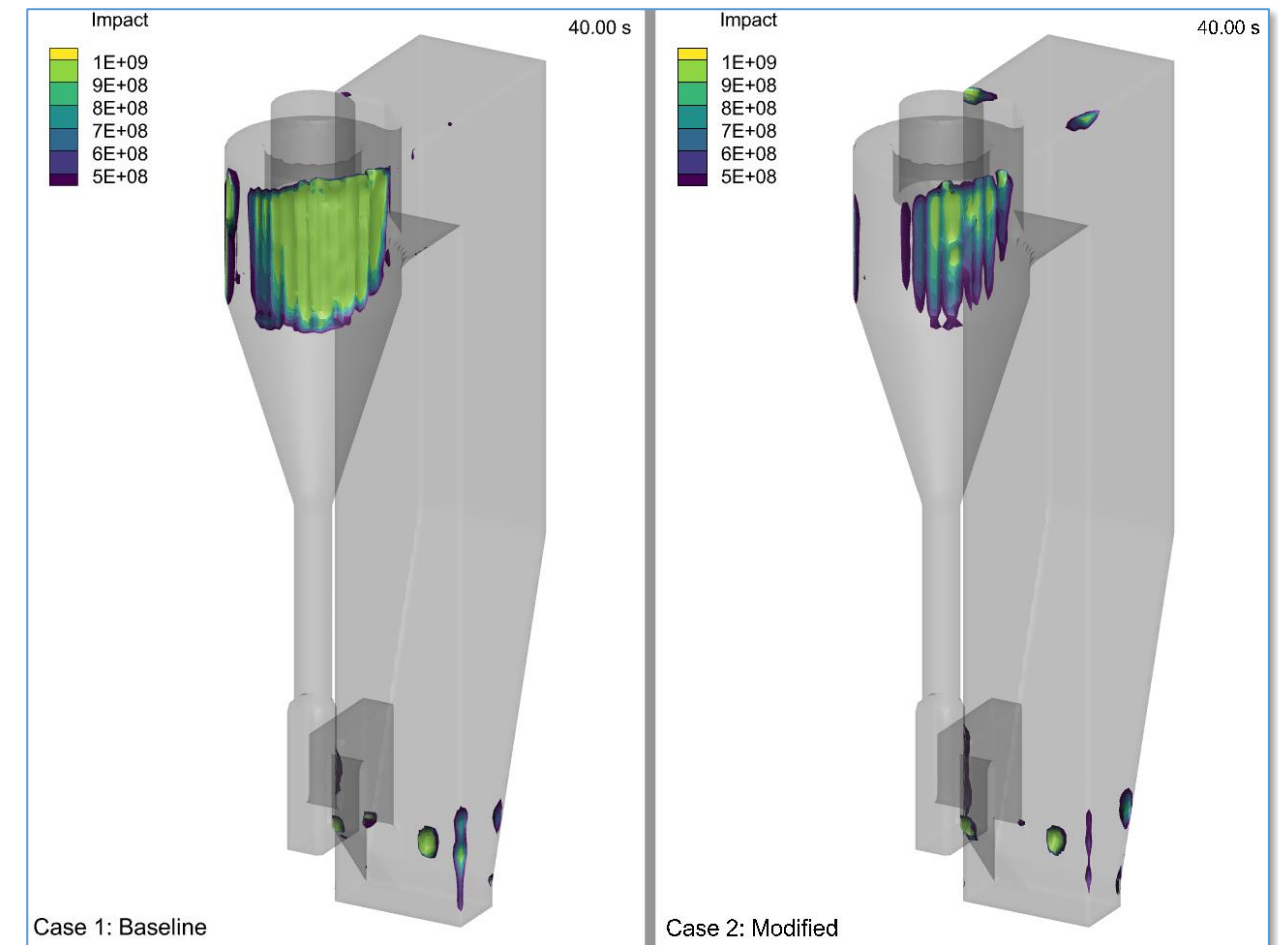


Analysis: Erosion

Areas most likely to experience erosion will be visualized

Case 2 has lower erosion than Case 1

- Case 1 cyclone inlet width = 1150 mm
- Case 2 cyclone inlet width = 1350 mm



Analysis: Cyclone Separation Efficiency

Cyclone efficiency will be calculated from flux plane data using Tecplot for Barracuda

