Gating and Riser Design Modules

GRD1: Functions and Features of a Rigging System

In this module, we will discuss the functions of risers, the types of risers and their features, the functions and features of a gating system, and the use of riser sleeves and chills. This module also covers basic riser and gating system terminology. By the end of this module, you should be able to describe the functions of risers; list the types of risers and their features; describe the function and features of a gating system; and describe the use of sleeves and chills. Estimated module time is 30 minutes. CEU units awarded: 0.1 CEU units.

GRD2: Basics of Heat Transfer Principles for Riser Design

In this module, we will discuss the influences of heat flow, identify the two types of solidification, how shrinkage occurs. This module also looks at how alloys and shrinkage occur differently in metalcastings. By the end of this module, you should be able to explain the influence of heat flow and identify the effects of different alloys on risers. Estimated module time is 1 hour. CEU units awarded: 0.1 CEU units.

GRD3: Risering Iron Castings

In this module, we will identify the uniqueness of feeding graphitic cast iron alloys. We will identify three ways risers should be designed for cast iron and identify factors that effect volume changes. By the end of this module, you should be able to list unique riser considerations for iron castings. Estimated module time is 45 minutes. CEU units awarded: 0.1 CEU units.

GRD4: Basics of Fluid Dynamics for Metalcasting Gating Systems

In this module, we will examine the basics of fluid dynamics for metalcasting gating systems and define fluid flow in gating systems. This module will also define the laws of fluid dynamics and the effects of momentum and turbulence on gating systems. By the end of this module, you should be able to describe the basics of fluid dynamic principles related to gravity fed metalcasting gating design. Estimated module time is 1 hour. CEU units awarded: 0.1 CEU units.