

QRC2

Hands-on Rolling of Rounds & Flats

Quad has been presenting and continuously improving specialized Hands-on Operator/Roller training since 1985. The Hands-on courses use the math and science involved in rolling explained in real terms that can be understood and used by Operators. Actual rolling on Quad's Training Mill reinforces theory with reality to help participants improve productivity at your mill.



Training Affects Your Bottom Line

Operator training is an important component to helping your operators get the most out of each shift. The hands-on approach ensures that concepts are understood and



reinforced in the familiar mill environment. All aspects of rolling, from pass design and setup sheets through to mill setup and bar measurements are covered. The bar is studied after each pass. The Operators get to try things and “see for themselves”. Defects encountered are discussed and solutions are implemented to ensure complete understanding. A comprehensive textbook is included, for use as a reference back at the plant.

What Participants have said about our Training Program:

- *I liked seeing the effect of our predictions* (Roller, Nucor Steel)
- *Helped with problem solving & why things happen* (Pass Designer, Steel of West Virginia)
- *The “hands-on” aspect of the class was excellent* (Roller, Gerdau Ameristeel)
- *Instructor made it easy to understand & took extra time to explain things in more detail when needed* (Roller, Mittal Bar Mill)
- *Applicable to our rolling mills, much will be useful in the future* (AR, Slater Stainless)

Course Objectives:

To help the participants develop a more in depth understanding of the fundamental principals of rolling rounds and flats. To address the various pass design methods from an operator's point of view and develop an understanding of how to set and adjust passes to make a quality product.



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Over 75% of North American Mini Mills have used Quad for Training

Benefits:

Hands on rolling experience, allowing participants to “see for themselves”. Improved productivity due to increased technical knowledge and understanding of how pass design and setup sheets work. Cost effective production decisions due to improved problem solving skills.

Course Outline:

Rolling Process:

Review of rolling process from pass design & setup through to operation & feedback.

Rounds Pass Design & Setup Sheet:

Rounds pass design sequences and applications include oval-round and oval-square. The finished round and leader oval passes used in the mill are designed from first principles. A rolling schedule is developed for both oval-square and oval-round pass sequences. All aspects of a product setup sheet including gap settings and adjusting for mill spring.

Rounds Rolling:

The pass sequence developed in the classroom is applied on Quad’s 8” lab mill using lead billets. The participants set the mill & guides and roll the bar. The bar is analyzed and measured after each pass and compared to the setup sheet plan. Any corrective action is applied to the next pass. Defects created are discussed and corrective action applied. Multiple billets are rolled so lessons learned can be applied and the results observed.

Flats Pass Design & Setup Sheet:

Flats pass design sequences and applications for flat & edge method. The edging pass is designed from first principles. A rolling schedule is developed for producing a flat product from a square billet using two different edging pass constraints to illustrate how edging passes affect section quality. All aspects of producing a product setup sheet including gap settings and adjusting for mill spring.

Flats Rolling:

Each pass sequence developed is rolled on Quad’s 8” lab mill using lead billets.

Who Should Attend:

Mill Managers, Shift Supervisors, Rollers, Assistant Rollers, Pulpit Operators, Engineers, Pass Designers, Roll and Setup Shop Supervisors, Quality Control.



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