



HOW TO RUN AN ENGAGING TOUR

QUICK GUIDE

Use this tour guide as a starting point for your facility tour. Customize to fit your needs and schedule.

STEEL INDUSTRY INTRODUCTION

Short Industry Promotional Video

- AISC Structural Steel Industry Promotional Video

VR Videos

- Panning enabled for PC, Apple, and Android Devices
- Enabled for VR/360° viewers on Android Devices

COMPANY INTRODUCTION

Consider the messaging you would like to share with potential employees.

- Company culture
- Company history
- Pay range for entry-level positions
- Career path examples within the current staff
- Career advancement opportunities
- Education reimbursement/schedule accommodations

AISC INTRODUCTION

The American Institute of Steel Construction (AISC), headquartered in Chicago, is a non-partisan, not-for-profit technical institute and trade association established in 1921 to serve the structural steel design community and construction industry in the United States. Consider sharing how your company engages with AISC.

aisc.org/IBuiltThat



**Smarter.
Stronger.
Steel.**

TOUR HIGHLIGHTS: SHOP FLOOR

MATERIAL YARD

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Material identification
 - Have some small pieces of each type of material received in the yard and explain what their primary function is in a steel structure
- Steel supply chain for your shop
 - Share if you order your material from the mill or a service center and why
 1. Order by job/project
 2. How much and what kind of stock do you keep on hand?
 - Share how the material arrives (truck or rail?) and the process for adding it to your inventory.
- Preview the next stop for the material

MATERIAL HANDLING

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Types of lifts and how they are used throughout the facility
- Capacities and safety protocols
- Cost of each “touch” on a piece of steel and how that impacts the shop design and layout

SHOP PROCESSING EQUIPMENT

Saw

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Steel pieces come from the producer in set lengths and need to be cut to length for each project
- Some service centers will cut to length, reducing work in the shop
- Steel scrap is all collected and sent for recycling—structural steel is made from an average of 93% recycled steel

Beamline

Drill-line and/or Punch-line

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- How the holes in one piece align with another in the field and create a connection
- Explain the difference between drilling, punching, and burning holes
- Layout marking to assist in fitting

Robotics

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- How has robotics changed your fabrication processes including staffing?

TOUR HIGHLIGHTS: SHOP FLOOR

FITTING + LAYOUT

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Use a shop drawing to explain the function of layout and fitting
- Explain the design process at a high level and how it informs the creation of these shop drawings
 - Building project
 1. Architect designs building
 2. Structural engineer designs structure to hold up the floors, the roof, and everything else
 3. Detailers take the construction drawings produced by the structural engineer and draws every piece of steel that is required to build the structure
 4. Fitters layout the pieces in the shop drawings and tack them in the correct location
- Identify the tools required
- Point out features of a shop drawing
 - Bill of material
 - Ledger
 - Identify the main piece in the drawing and show how it matches the physical piece in front of them
 - Identify what the main piece might be used for and how it might fit into a project on-site
 - Identify the miscellaneous pieces being attached to the main piece and show how they match they physical piece in front of them
 - Identify what the miscellaneous pieces might be used for

SURFACE TREATMENT

Blasting

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- The process and why steel is blasted
- Points in the fabrication process when steel may be blasted
- The different surface preparation (SP) levels
- Shot: Let them feel and see the shot. Explain how it works and what it's made of.

Painting

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- The process and why steel is painted or not
- Measuring paint (mils)
- Temperature limitations
- Intumescent

TOUR HIGHLIGHTS: OPERATIONS

OFFICE

- Fabrication is a business like all other businesses and requires a robust administrative staff to help the business run smoothly

CEO/PRESIDENT/OWNER

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Visualizes and guides the direction of the company
- Develops business relationships
- Can act as the face of the company

OPERATIONS

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Manages the folks performing the fabrication tasks and their schedules to cumulatively produce and deliver the structural steel pieces for each project

ESTIMATING

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Using historic company project cost information estimates the time and materials needed to complete a project under consideration and provides a budget proposal, or bid, to a general contractor for consideration
- Least weight does not equate to least cost
 - Reinforce the cost of the material is relatively fixed, but the more people's time and talent involved in the production of a project, the more it costs
 - Older practices prioritized material efficiency. Modern practices prioritize efficient use of employees' time and talent. See the historic built-up column example and compare it to a typical modern, single-member column.
- Fabricators build their manufacturing processes around reducing the time and "touches" for each piece of steel

TOUR HIGHLIGHTS: OPERATIONS

STEEL DETAILING

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Steel detailers (usually simply called detailers within their field) work closely with architects, engineers, general contractors, and steel fabricators.
- They usually find employment with steel fabricators, engineering firms, or independent steel detailing companies.
- Steel detailing companies and self-employed detailers subcontract primarily to steel fabricators and sometimes to general contractors and engineers.
- A steel detailer is a person who produces detailed drawings for steel fabricators and steel erectors. The detailer prepares detailed plans, drawings, and other documents for the manufacture and erection of steel members (columns, beams, braces, trusses, stairs, handrails, joists, metal decking, etc.) used in the construction of buildings, bridges, industrial plants, and nonbuilding structures.
- [SDS2 Demonstration](#)

PROJECT MANAGEMENT

- Questions to ask:
 - What is this position called?
 - What educational/experiential background is required or desirable when they start this position?
 - Is training provided on the job, in school, or a combination of both?
- Track a project from start to finish through receiving an accepted bid, to detailing, through fabrication, and delivery to the job site
- Typically works directly with the general contractor that oversees the entire construction project
- Manages communication between the fabricator and the rest of the project team
- Understanding the project schedule within the office and shop as well as the overall project schedule for related subcontractors is critical