

## GENERAL REQUIREMENTS

These requirements are approximate specifications for an installed **AcuraCoat®** System that is designed to produce hard coat, reflective, low-e, solar control, and self-clean coated glass. The capacity used in this estimate is for a 600 metric tonnes/day line with the ability to coat glass thickness ranges from 3.0 mm to 12.0 mm.

## CAPITAL INVESTMENT

The capital investment for an **AcuraCoat®** turnkey system includes two or three coater assemblies (integrated into the narrow end of the float bath furnace), chemical processing system, emissions control, process control system, and on-line inspection system. It also includes the technology license, custom engineering, project management, system installation, system commissioning, ongoing technical support, market development support, and chemistry supply. Price will vary depending on location, and does not include pre-engineering, local labor costs or customer costs including utility supply and civil works.

## GENERAL BATH AREA MODIFICATIONS

Coater Location:	Within the narrow end of the float-bath, 640-690°C
Side Seal Opening:	5600mm x 600mm (both sides of the bath) + 1320mm x 600mm (one side)
Bath Roof Heaters:	Removed from an area greater than 5600mm wide
Access:	No obstructions on the bath or the bath floor
Bath Cooling Load:	Estimated at 120kW per coater

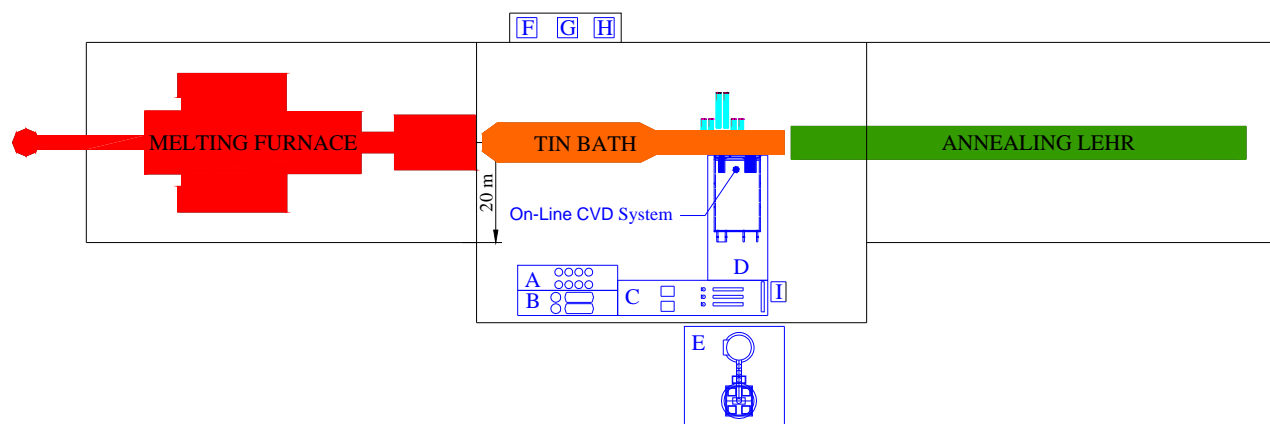
## COATING PERSONNEL MINIMUM REQUIREMENTS

<i>Region</i>	<i>Skill</i>	<i>Responsibility</i>
<b>Production Manager</b>	Scheduling Optimization	One (1) manager to direct all coatings operations. (Could be existing)
<b>Operators</b>	Process Monitor Lab Skills Equipment	Three (3) rotating operators with specialized training in QC, process control, equipment handling, on-line cleaning, and process equipment maintenance as needed. (Progressing to 2 crews as needed)
<b>Emissions Technician</b>	Process Monitor	One (1) operator with specialized training in emissions equipment and operation.
<b>Existing Maintenance</b>	Maintenance	Routinely for off-line cleaning. (2 people for 4 hours after each campaign)
<b>Existing HES</b>	Safe Operation	Training for existing/new staff in chemical related hazards, personal protective equipment (PPE), and waste disposal procedures.

## GENERAL BUILDING REQUIREMENTS

### SPACE REQUIREMENTS

<i>Area Description</i>	<i>Area m<sup>2</sup></i>	<i>~Width m</i>	<i>~Length m</i>
<i>A. Chemical Delivery and Storage</i>	100	5	20
<i>B. Chemical Staging and Transfer</i>	100	5	20
<i>C. Chemical Processing and Control</i>	210	7	30
<i>D. Coater Cleaning and Lifting System</i>	300	12	25
<i>E. Emissions Control</i>	400	20	20
<i>F. Electrical Cabinet Room (Opt. Integrate)</i>	16	4	4
<i>G. Quality Control Room (Opt. Integrate)</i>	16	4	4
<i>H. Control Room (Opt. Integrate)</i>	16	4	4
<i>I. Oil Cooler/Heater</i>	12	3	4



### UTILITY REQUIREMENTS

<i>Utility Type</i>	<i>Quantity</i>
<i>Electrical Power for Process</i>	1200 A (380VAC 50Hz)
<i>Electrical Power for QC</i>	110/220 V
<i>Water (Omitting Emissions)</i>	110 m <sup>3</sup> /hr
<i>De-Ionized Water</i>	5 l/hr
<i>Nitrogen</i>	500 N m <sup>3</sup> /hr
<i>Dry Air</i>	550 N m <sup>3</sup> /hr
<i>Fuel (Thermal Oxidizer)</i>	To be verified

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