ACT-18297 is a robotic cell for casting gate cutoff with a band saw. The cell is equipped with a 600 kg payload 6-axis articulated robotic arm, automatic tool changer, tool magazine, part load nests, re-grip indexer station, scrap bins, and a 5 HP hydraulic powered band saw.

**Specifications:**
- Robot arm payload: 600 kg
- Band saw: 5 HP hydraulic
- 60” x 60” mouth
- Tool change EOAT
- Tool magazine with 3 docking nests
- Regrip station with 180 degree indexer
- Force control for part sensing
- Band saw present sensor

**Options:**
- Scrap bins
- Scrap bin shuttle for scrap sorting
- Full dust and safety enclosure
- Various size robotic arms (50—900 kg)
- HMI
GATE CUTOFF OPERATION
The part in the robot grasp is positioned at the band saw for cutting of gates and runners in a programmed sequence. Force sensing is used to compensate for casting errors and to always place the part correctly on the support table at the saw. Sections of gates are cut and runners slide down an angled chute into scrap bins.

RE-GRIP WITH 180 DEGREE INDEX
Many parts cannot be cut with one grip due to robot articulation limits or interference with part handling tools/grippers. In such cases, parts can be placed on the re-grip station, indexed 180 degrees, and gripped from the opposite end, thus allowing access for cutting the remainder of features. If needed, the robot can swap grippers during re-grip in order to grasp parts from another end.

TOOL MAGAZINE
Tool assemblies designed for parts handling are stored on docking nest arranged in a magazine/rack. These nests are equipped with tool presence sensors, which help avoid crashes during tool handling/exchanges.

Optional automatic dust lid or cover is available to protect tool interfaces in dusty environments. All tool handling routines are programmed.

END OF ARM TOOLING
Automatic tool change adapter is mounted on robot’s end of arm which allows automatic tool change between parts or between various process operations.

Electrical signals and pneumatic lines are connected to the tools when they are locked into the tool change adapter. Tool assemblies are heavy duty grippers with custom made fingers, and are equipped with tool locked/unlocked and gripper open/closed sensors.