



## **JOB DESCRIPTIONS**

(Job descriptions taken from the book, *Job Description and Classification Manual for Hourly Rated Production, Maintenance and Non-Confidential Clerical Jobs*, by the United Steelworkers of America – AFL-CIO and Coordinating Committee Steel Companies, January 1, 1963.)

(Working procedures taken from the book, *Job Description and Classification Manual for Hourly Rated Production, Maintenance and Non-Confidential Clerical Jobs*)

### Cinderman:

1. sprays water on cinder
2. shovels cinder into wheelbarrow
3. wheels cinder to cinder dump and dumps wheelbarrow
4. sweeps walkway and working area

### Blooming mill roller:

1. checks rolling schedule, determines draft, number of passes, and rolling speed for each size and grade to be rolled
2. operates controls to regulate draft, direction and speed of rolls and tables to roll to proper size
3. determines if material has been properly heated and soaked by making a visual inspection of material and by action of mil during rolling
4. directs and closely coordinates rolling practices
5. adjusts mill equipment for proper alignment
6. directs and works with crew on all mill changes
7. prepares reports regarding condition of mill, delays, etc.

### Hooker:

1. hooks and directs crane in making lifts to conditioning points and in spreading and turning steel on conditioning beds
2. bundles steel as required
3. does necessary hooking and directing crane for loading trucks, railroad cars or pickling tanks
4. places blocking material in cars or trucks
5. bands steel, as required, with the exception of slabs

### Scarfer:

1. assembles scarfing torch, adjusts tip, connects hose to fuel supply and regulates gas pressures
2. checks for and marks surface defects
3. inserts and positions starting rod, lights torch, and adjusts gas mixture until correct flame is obtained
4. directs flame of torch toward end of defect to start flow of metal, spot or skin scarfs material as required



5. feeds starting rod when necessary
6. starts and stops mechanical turning and handling equipment and uses wrench to turn, reposition or spread material
7. scrapes off burned metal from scarfed area using scraper and air
8. checks and rescarfs material if needed
9. signals for placing or removing lifts of material at beds or turning device
10. keeps assigned working area and equipment in clean and orderly condition

#### Salt thrower:

1. stands on floor next to lifting table, using small hand scoop, scatters salt on slab as it emerges from and re-enters back side of mill
2. operates electric controls to turn water sprays on/off as directed by Roller or Screwman, and uses long-handled scraper to remove masses of scale
3. occasionally uses long-handled hook to aid in aligning plates on lifting table for entry into mill rolls

#### Rougher:

1. receives instructions as to rolling schedule, setups, sizes, etc.
2. changes and sets up rolls, roll housings, bearings, guides, sprays, makes pass changes on roughing stands
3. checks setups to insure proper entry and delivery of material
4. observes progress of material through roughing stands and makes adjustment to guides, roll draft, water sprays
5. dismantles and assembles spare roughing stands, guides, and boxes for installation on mill
6. dresses and grinds guides
7. assists mill crew on mill changes and cobble removal

#### Bar catcher:

1. uses tongs to catch end of bar from one pass, loops bar around looping post and guides bar into next pass
2. uses shear to crop end of bar
3. checks bearings and rolls for water flow, adjusts water valves
4. assists on roll changes and setting up guides and guide boxes
5. hooks up for and directs crane in pulling cobbles from mill

#### Coil slitter:

1. checks schedule of material to be processed
2. sets up slitter by setting spacers and knives for proper width and clearance for multiple slits; adjusts in-line units such as welder, leveler, oiler, shear, guide, and tension; dresses slitter knives
3. prepares and charges coils into entry unit and threads strip manually or by operating controls
4. operates controls to start, jog and regulate speed of line
5. checks strip and makes slitter adjustments
6. prepares reports and identifies material



7. hooks and unhooks material to and from line
8. determines, directs and performs knife adjustments or changes
9. cleans and makes adjustments to equipment

#### Coiler:

1. operates coilers by means of electrical controls, in coiling hot strip coming from the mill; operates hot bed roller line, hot bed kick-off, coiler chutes, and coil up-enders
2. observes dials which indicates roll line and coiler speeds and makes adjustments as necessary to maintain desired proportional speed
3. operates stackers, adjusting wings according to section and adjusting pinch roll speed to conform with delivery speed of mill, and moves stackers when filled to align empty stacker
4. directs the adjustment of equipment during a section change
5. assists with roll changes, performing tasks as directed

#### Switchman:

1. assists in the movement of freight cars in general plant switching as directed by the Conductor
2. throws switches and makes couplings for the diesel electric locomotive
3. signals Engineer as to movements of the train when making couplings, moving in or out of switches or in congested areas, and assists in identification of cars to be moved
4. operates train in accordance with plant safety manual
5. reports condition of track and track bed as observed to Yardmaster or Conductor

#### Car dumper operator:

1. operates car dumping control in turning coal car over and dumping into shuttle car and hopper
2. operates control in positioning shuttle car over hopper and dumping coal into hopper
3. checks and records car numbers, dates and checks for coal
4. breaks up frozen coal in cars with pick
5. lubricates and cleans equipment
6. assists in adjusting gas burners used for thawing out frozen coal
7. cleans up around building, walks, etc.

#### Screenman:

1. operates crushers and screening equipment in crushing and screening coke
2. attaches cable hooks to cars and operates winch in pulling cars on track under loading chute
3. operates controls in loading cars
4. removes and sets safety flags on tracks
5. makes out report noting car numbers, time loaded, type of coke
6. tacks color cards on cars



Nozzleman:

1. uses long rod to remove carbon and clean out nozzles and gas wells
2. replaces all broken nozzles
3. assists in digging out “stickers”

Larryman:

1. operates larry car controls in spotting car under coal bins; operates bin controls in filling and properly distributing coal in larry car hoppers; moves car to oven charging holes, and operates controls in charging coal into oven
2. replaces and seals charging hole lids and opens damper to turn gas into collecting mains
3. assists in poking damper boxes and collecting mains
4. cleans plugged standpipes, charging holes, liquor sprays and tar sprays
5. relieves pressure on ovens by pulling caps on standpipes or opening bleeders in case of loss of suction
6. cleans damper boxes and goosenecks
7. sweeps and cleans larry car and battery top

Stove tender:

1. changes a stove on each furnace by following a set procedure
2. takes a stove off the line by following a set procedure
3. watches the condition of the stoves and cleans out the carbon, dirt, etc., when necessary; responsible for maintenance of stoves, reporting to General Foreman when service is needed
4. cleans blow pipes and peep sights in blow stops
5. assists the Blower in taking care of the condition of the furnace by watching the product, tuyeres, blow pipes and slag flush
6. assists on casts by handling the short valve lever, taking wind pressure off or putting on when notified by Blower
7. gets a report from Stock House every hour on number and amount of charges
8. assists the Blower, by delivering any orders for change of burden to Engine Room, Stock House or any other place; notifies Gas Washer Operator of impending stop of furnace
9. assumes the duties of the Blower in his absence
10. required to catch test samples in the absence of Test Boy; orders cars of granulated cinder occasionally; records numbers of slag and hot metal ladles that are used
11. occasionally makes out switch orders for granulated slag

Keeper:

1. directs and assists Cast House crew
2. inspects, repairs and cleans iron and cinder notch, trough, runners, spouts and gates
3. checks and reports condition of iron ladles and positions under spout prior to cast
4. drills and opens iron notch using power drill, oxygen lance and bar; opens cinder notch



5. controls flow of molten iron and cinder during cast; operates gates, switches, runners, and insures proper filling of iron ladles and slag pit
6. uses bars, hooks, scraper to keep iron notch trough and runners clear of coke, slag, etc., during casting period
7. operates mud gun to seal iron notch
8. observes furnace cooling system for proper operation and notifies supervision in event of trouble
9. assists in changing furnace tuyeres, blow pipes, coolers, bosh plates, etc.
10. responsible for and assists in keeping casting floor area and equipment in a clean and orderly condition

Clayman:

1. cleans and loads mud gun and replaces damaged parts
2. assists in cleaning and preparing iron trough
3. carries tools used in cast house, such as tapping bars, drills and rods to and from blacksmith shop
4. assists in handling all materials used in cast house
5. does general clean-up work in cast house
6. assists in changing tuyeres, coolers, blow pipes, etc.

Pig machine operator:

1. operates electrically controlled jib crane, tipping hot metal ladle toward pig mould chain
2. determines speed of flow of iron to prevent splashing and overflow
3. observes mould chain for unusual conditions
4. assists Runnerman in changing broken moulds, then restarts the machine
5. throws bags of soda ash or shovels scale into ladle
6. uses long handled hoe to skim slag from top of ladle
7. operates electrically controlled tilting machine while reladling from mixer type ladle to small ladles
8. when pouring merchant pig iron, Operator must make certain that pigs have smooth tops and are all of the same size (approx. 40 lbs.)
9. determines by vision and experience – if pigs are not smooth, he must inspect lime vats and moulds
10. relines iron runner with runner clay
11. assists Runnerman to clean up pig machine yard

Topman:

1. tests equipment
2. proceeds to furnace top as directed by Foreman
3. shovels flue dust, coke and ore into well on furnace top; railroad car is spotted beneath well opening
4. takes equipment to office for collection and servicing; watches pressure gauge and checks cardoxide container; if gauge indicates less than 25 atmosphere, or if container feels hot, must return to furnace
5. six Topmen work on furnace top at one time with a Foreman



6. after top is rough cleaned, all remaining dust is cleaned from rotating bell top and floor by means of air lance
7. cleans high top using shovel and broom, cleaning around moving sheave wheels and cables
8. uses elevator or climbs to first platform; cleans stairways to high top, stove top platforms, water seals, stairways from furnace to high line and gas washer top platforms
9. must take preliminary course in gas training (1 week) and receives instructions once per month
10. receives instructions in administering artificial respiration and use resuscitation
11. if weather precludes work on top of furnace, may be required to perform general cleaning up and labor work

#### Skull cracker crane:

1. handles scrap kish from blast furnace pig machine, breaking iron scrap into small lumps
2. lubricates and cleans skull cracker crane
3. receives instructions from the Blast Furnace Electrical Foreman and Pig Machine Turn Foreman
4. inspects visually the condition of bearings, cables, motors, gears, pinions, etc., prior to operating crane
5. tests limit switch for proper operation at beginning of each turn
6. operates Farval one-shot system of lubrication
7. transports grease from Blast Furnace Ladle House Oil Storage Room on top of crane
8. notifies the Pig Machine Motor Inspector of any mechanical or electrical trouble in the event the crane breaks down
9. assists Motor Inspector in making repairs to crane such as changing motors, shafts, pinions, etc.
10. handles 11-ton steel ball with use of 50 hp electromagnet
11. drops ball on kish scrap, breaking into small lumps
12. uses magnet to pick up kish scrap from pit and place in railroad hopper cars
13. determines types of scrap (pig iron scrap, steel scrap, #2 scrap)
14. uses magnet to unload foreign railroad cars loaded with machine chips
15. Transfers machine chips to railroad hopper cars
16. loads large unbroken skulls on railroad flat cars
17. transfers, with magnet, scrap iron from railroad gondola cars to hopper cars
18. wets down kish pit with hose or spray
19. inspects railroad cars for broken plankings prior to loading or unloading
20. reports car numbers of cars loaded and unloaded to Foreman
21. reports condition of cars to Pig Machine Foreman
22. checks condition of cars before loading

#### Charging machine operator:

1. charges scrap, ore, limestone and other materials into furnace
2. places and removes charging boxes on or from buggies



3. moves drags of buggies along charging floor
4. places charging boxes and materials on stands or floor for later use
5. places and removes hot metal spout at furnace
6. rerails buggies on track
7. operates charging machine to assist in tearing out furnace banks, roofs and walls
8. holds furnace doors and frames in position when changing furnace doors using charging machine spindle
9. inspects charging machine for condition

First helper:

1. examines gas ports, fuel guns, bottom checker and other parts
2. charges furnace with preheating wood and lights wood fire; starts fuel fire when furnace is heated to proper temperature; prepares furnace for charge
3. inspects bottom and walls of furnace; blows metal out of holes in bottom with compressed air; shovels refractory materials into furnace; operates dolomite machine
4. instructs Charging Machine Operator to begin charging materials into furnace
5. instructs Operator where to place materials in furnace; operates levers on pull-up stand to control doors
6. manipulates large spoon to build up front walls of furnace
7. banks doors by shoveling dolomite onto sill of furnace door
8. dams and cleans slag hole with shovel and bar and opens hole for slagging off
9. regulates valves to mix liquid fuel and air and reverses the flow
10. determines correct time for receiving hot metal; receives data for hot metal charge from Melter and Mixer Foreman; directs setting of hot metal spouts
11. hot metal spout removed; rebanks door; directs Craneman

Stripper craneman:

1. strips moulds from ingots
2. transports moulds to empty ingot buggies
3. loosens ingots in big end-up moulds using an extractor
4. transports stickers and short ingots to inverted stripper for loosening and wedging as required
5. operates device in wedging ingots
6. transports fallen ingots to buggies using cable slings and hooks attached to hoisting tongs by laborer
7. inspects, lubricates and makes minor repairs to crane
8. cleans crane; transports all moulds that cannot be extracted to inverted stripper

Batch pickler:

1. makes up and adjusts solutions by operating valves in adding acid, water and steam in acquiring and maintaining proper concentration and temperature of solutions for material to be pickled
2. uses testing equipment and reads meters in testing solution concentration and temperature





3. operates controls in hooking pickle crates to plunger arms, starting and stopping pickling machine
4. determines length of time material is pickled
5. inspects sheets before and after pickling and records pickling time of all lifts and acid used
6. informs Foreman as to condition of solutions and operates valves in draining tanks as needed

Flying shearman:

1. consults order card to ascertain shearing specifications
2. operates control in setting trimmer knives to ordered width
3. calls maintenance men when slitters are to be used
4. adjusts roller leveler to obtain flat sheets and accurate feeding of strip to end shear
5. sets end shear knives for various strip gauges
6. assists in charging coil and threading strip through line
7. operates controls in starting and stopping shear line and synchronizing speed of line units
8. inspects and measures strip for correct size; processes damage
9. directs and assists in making adjustments

Shot blaster:

1. receives information from Foreman regarding sequence of lifts to be blasted, shot size required, etc.
2. operates controls in starting and stopping unit
3. makes necessary adjustments and regulates speed of conveyor belt in controlling degree of blasting
4. inspects product at exit end of unit to insure correct surface
5. makes up lift cards for finished lifts and compiles production reports
6. changes rotor blades as needed
7. directs crew in changing and adding shot
8. signals Craneman in providing incoming material and clearing conveyor
9. makes minor repairs to machine with assistance from Helpers

Babbittman:

1. receives job assignment from Assistant Foreman together with necessary prints or sketches; positions work piece and necessary mandrels, jigs, etc., on pouring plate; heats work piece preparatory to pouring the molten Babbitt; transfers molten Babbitt from pot to the job with hand ladle or pouring spout from electric pots; pours sufficient metal into work piece to fulfill job requirements; maintains proper temperature in Babbitt pots to insure proper pouring qualities; recovers used Babbitt from old parts by melting it out in burnout furnace or with gas flame, remelting in pot, and cleaning foreign material from the Babbitt by removing skimmings
2. determines proper Babbitt heats according to instructions and specifications





3. typical jobs processed are: 160” plate, 44” bloom, and 36” slab mill roll bearings; rail mill and billet mill pinion bearings; 38” strip, billet, and merchant mill bearings; other smaller bearings for shop and mill equipment