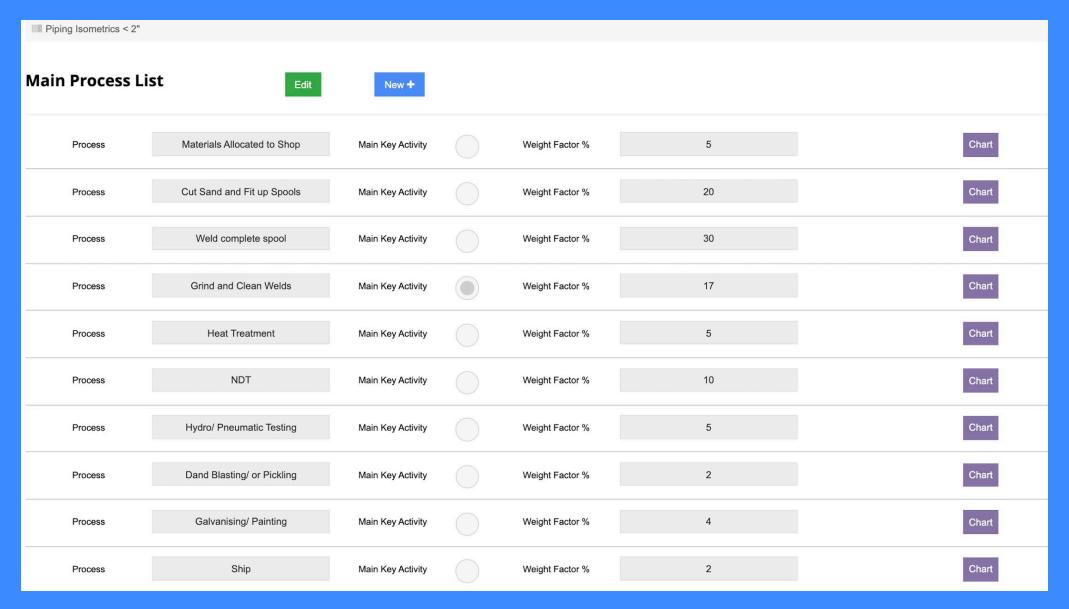
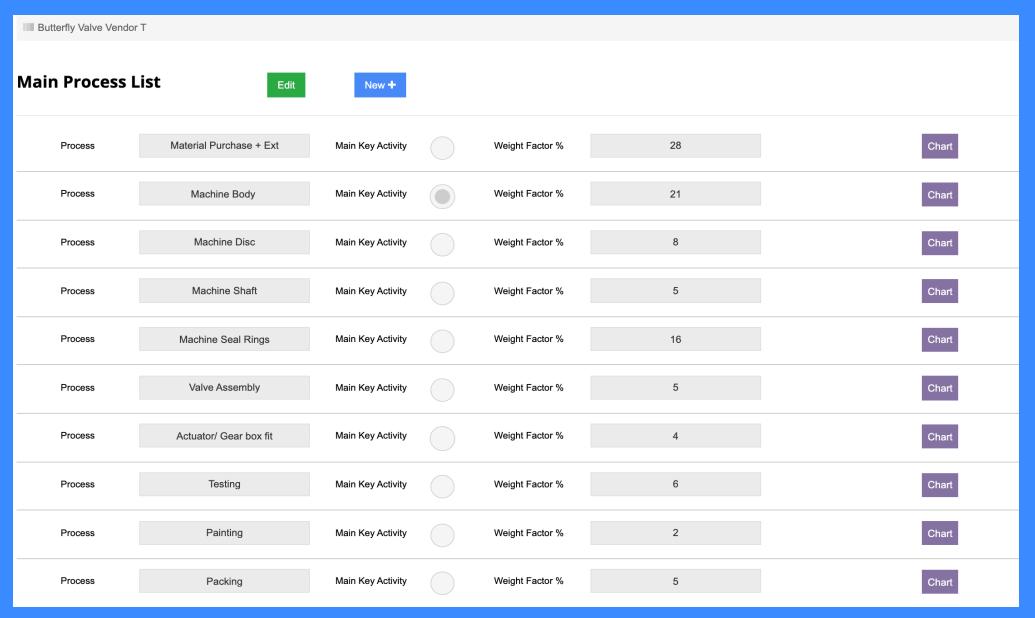
## Index sheet for Construction equipment commonly used in Petrochemical & Power Generation projects

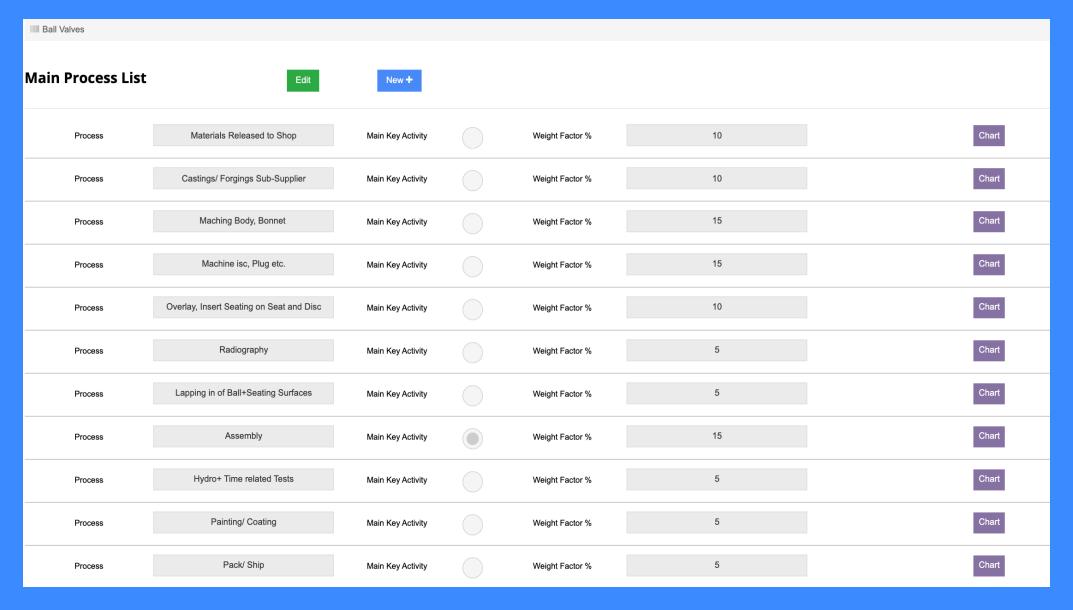
| Item | Equiment Description Page                 | Number/ |
|------|-------------------------------------------|---------|
| 1    | Detailed Engineering Structural Steelwork | 2       |
| 2    | Piping Isometrics < 2"                    | 3       |
| 3    | Butterfly Valve                           | 4       |
| 4    | Ball Valve                                | 5       |
| 5    | Tower/ Column                             | 6       |
| 6    | Exchanger Sheet & Tube                    | 7       |
| 7    | Turbine Steam                             | 8       |
| 8    | Pump - Vertical                           | 9       |

| IIII Detailed Engineering | Structural Steelwork : 146 weeks |                   |                 |       |       |
|---------------------------|----------------------------------|-------------------|-----------------|-------|-------|
| Processes                 | Edit                             | New +             |                 |       |       |
| Process                   | B1Main-Data                      | Main Key Activity | Weight Factor % | 30    | Chart |
| Process                   | B2Guidelines                     | Main Key Activity | Weight Factor % | 3.33  | Chart |
| Process                   | C1-C6Basics                      | Main Key Activity | Weight Factor % | 3.33  | Chart |
| Process                   | C7Prelim-Mat-List                | Main Key Activity | Weight Factor % | 0.68  | Chart |
| Process                   | C8-C10Connections                | Main Key Activity | Weight Factor % | 23.33 | Chart |
| Process                   | C11-C12-3D-Model                 | Main Key Activity | Weight Factor % | 21.67 | Chart |
| Process                   | C13-Issue-GA-Dwgs                | Main Key Activity | Weight Factor % | 1.33  | Chart |
| Process                   | C14SBE-Approvals                 | Main Key Activity | Weight Factor % | 3.33  | Chart |
| Process                   | C15-C20WorkshopDoc               | Main Key Activity | Weight Factor % | 13    | Chart |



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| IIIII Tower 1 : 342 Week |                                            |                   |                 |    |       |
|--------------------------|--------------------------------------------|-------------------|-----------------|----|-------|
| Main Process List        | Edit                                       | New +             |                 |    |       |
| Process                  | Issue Drawings                             | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | Material Supply+ PO tests                  | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                  | WPP + Cutting lists                        | Main Key Activity | Weight Factor % | 3  | Chart |
| Process                  | CNC Trays, Baffles etc.                    | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | CNC Supporting                             | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | Fit up, Man. Manways                       | Main Key Activity | Weight Factor % | 8  | Chart |
| Process                  | Shell Courses, Heads WELD                  | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                  | Weld Skirt, Int Baffles, Support clips     | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | Asssemble, weld weirs, Baffles, Downcomers | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                  | Assemble Bubble caps, tray fittings etc    | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                  | Sress Relieve                              | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | NDE                                        | Main Key Activity | Weight Factor % | 4  | Chart |
| Process                  | Hydrostatic Testing                        | Main Key Activity | Weight Factor % | 2  | Chart |
| Process                  | Install Internals                          | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                  | Painting                                   | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                  | Packing, Ship Preparation                  | Main Key Activity | Weight Factor % | 3  | Chart |

| IIIII Exchanger - Shell & Tube |                                            |                   |                 |    |       |
|--------------------------------|--------------------------------------------|-------------------|-----------------|----|-------|
| Main Process List              | Edit                                       | New +             |                 |    |       |
| Process                        | Drawings & Details to Fabricator           | Main Key Activity | Weight Factor % | 2  | Chart |
| Process                        | Material Supply + PO Test requirements     | Main Key Activity | Weight Factor % | 7  | Chart |
| Process                        | WPP, Cutting Lists, Maching req.           | Main Key Activity | Weight Factor % | 2  | Chart |
| Process                        | Machine Tube Sheets and Girth Flanges      | Main Key Activity | Weight Factor % | 6  | Chart |
| Process                        | Prep Shell & Channels for welding          | Main Key Activity | Weight Factor % | 3  | Chart |
| Process                        | Weld Girth Flanges to Shell/ Channels      | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                        | Layout Nozzle locations on Shell/ Channels | Main Key Activity | Weight Factor % | 2  | Chart |
| Process                        | Fit & weld Nozzles in Shell/ Channels      | Main Key Activity | Weight Factor % | 10 | Chart |
| Process                        | Clean all internal welds                   | Main Key Activity | Weight Factor % | 2  | Chart |
| Process                        | Stress Relieve                             | Main Key Activity | Weight Factor % | 7  | Chart |
| Process                        | NDE                                        | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                        | Assemble & insert Tube Bundle into Shell   | Main Key Activity | Weight Factor % | 5  | Chart |
| Process                        | Fit and weld Tube Sheets                   | Main Key Activity | Weight Factor % | 18 | Chart |
| Process                        | Roll Tube Sheets(Expansion)                | Main Key Activity | Weight Factor % | 3  | Chart |
| Process                        | Pre-Heat Tube to Tube Sheet welds          | Main Key Activity | Weight Factor % | 3  | Chart |
| Process                        | Hydrotest Shell                            | Main Key Activity | Weight Factor % | 4  | Chart |
| Process                        | Install Channels                           | Main Key Activity | Weight Factor % | 3  | Chart |
| Process                        | Clean & Paint                              | Main Key Activity | Weight Factor % | 4  | Chart |
| Process                        | Final Inspection                           | Main Key Activity | Weight Factor % | 1  | Chart |
| Process                        | Pack & Ship                                | Main Key Activity | Weight Factor % | 3  | Chart |

| IIII Turbine Steam : 357 Week |                                          |                   |   |                   |     |       |
|-------------------------------|------------------------------------------|-------------------|---|-------------------|-----|-------|
| Main Process List             | Edn                                      | Now +             |   |                   |     |       |
| Process                       | Materials Purchase/Release to shop       | Main Key Activity |   | Weight Factor 16  | 5   | Chart |
| Process                       | Machine case CASTING                     | Main Key Activity |   | Weight Factor %   | 4   | Chart |
| Process                       | Machine steam chest Casting              | Main Key Activity |   | Weight Factor %   | 74, | Chart |
| Process                       | Machine Diaphragm Casting                | Main Key Activity |   | Weight Factor %   | 4   | Chart |
| Process                       | Shaft Forgings                           | Main Key Activity |   | Weight Factor %   | 5   | Chart |
| Process                       | Machine to Shaft                         | Main Key Activity |   | Weight Factor %   | 3   | Chart |
| Process                       | Wheel Forgings                           | Main Key Activity |   | Weight Factor %   | 5   | Chart |
| Process                       | Machine wheels                           | Main Key Activity |   | Weight Factor %   | 3   | Chart |
| Process                       | Machine Governor Valve asemblies         | Main Key Activity |   | Weight Factor 1/6 | 3   | Chart |
| Process                       | Nozzle Block & Blade forgings            | Main Key Activity |   | Weight Factor %   | 3   | Chart |
| Process                       | Radial Bearings                          | Main Key Activity |   | Weight Factor %   | 2   |       |
| Process                       | Thrust Bearings                          | Main Key Activity |   | Weight Factor %   | 2   |       |
| Process                       | Shaft Seals                              | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Lube Oil, pumps and drivers              | Main Key Activity |   | Weight Factor %   | 3   | Chart |
| Process                       | Lube Oil Filters and Coolers             | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Governers and Over speed Trip Assemblies | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Ejectors and intercoolers shaft seals    | Main Key Activity |   | Weight Factor %   | 3   |       |
| Process                       | Instrument and Controls                  | Main Key Activity | 0 | Weight Factor %   | 2   | Chart |
| Process                       | Plates,nozzles lube oil resevoir         | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Misc. pipe, valves and fittings          | Main Key Activity |   | Weight Factor %   | 4   | Chart |
| Process                       | Dynamic Balancing of Rotating Elem       | Main Key Activity | 0 | Weight Factor %   | 2.5 |       |
| Process                       | HydroTest Case and SteamChest            | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Manufacture Oil Resevoirs                | Main Key Activity |   | Weight Factor %   | 2.5 | Chart |
| Process                       | Assembly of Turbine                      | Main Key Activity | • | Weight Factor %   | :15 |       |
| Process                       | Running Test                             | Main Key Activity |   | Weight Factor %   | 2   | Chart |
| Process                       | Performance Test                         | Main Key Activity |   | Weight Factor %   | 5   | Chart |
| Process                       | Conservation                             | Main Key Activity | 0 | Weight Factor %   | 2   | Chart |
| Process                       | Painting                                 | Main Key Activity |   | Weight Factor %   | 3   |       |
| Process                       | Packing/ Prepare for Shipment            | Main Key Activity |   | Weight Factor %   | 3   | Chart |

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