Why should I purchase EPCPROMAN SOFTWARE?

(AutoSPOOL, SPOOLMAN/ERMAN) (Manual Vs Automatic)

INDEX

Why should I purchase (Manual Vs Automatic)

Existing Process General Explanation

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14	*Manual Subcontractor Billing Preparation and Certification.*	Automatic/Interactive/Rule based
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16	*Manual Estimation of consumables/Manpower planning*	Automatic/Interactive/Rule based
17	*Manual Matching Front analysis against material received (available/inspected at Store)*	Automatic/Interactive/Rule based

18	*Manual Look ahead planning with respect to material received, Purchase order, Purchase requisition , Material Take off from engineering etc.*	Automatic/Interactive/Rule based
19	*Manual Vendor delivery/expedition from Procurement to Construction.*	Automatic/Interactive/Rule based
20	*Manual generation of MIV/MRV(material Issue Voucher)*	Automatic/Interactive/Rule based
21	*Manual updating of Store inward and outward inventory items.*	Automatic/Interactive/Rule based
22	*Manual daily material stock updating and reconciliation of material*	Automatic/Interactive/Rule based
23	*Manually creating DMR(GRN) Daily material receipt.*	Automatic/Interactive/Rule based
24	*Manually prioritizing the lines based on construction priority, Area, inch Dia, Elevation etc.*	Automatic/Interactive/Rule based
25	*Manual calculation of pending material to be*	Automatic
26	*Manual activity related with all QA/QC and NDT progress monitoring.*	Automatic/Interactive/Rule based
27	*Manual creation of Line History List*	Automatic
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29	*Manual Spool/isometric/Loop/system Front clearance for Erection.*	Automatic/Interactive/Rule based
30	*Manual Creation of Punch point and liquidation of the same.*	Automatic/Interactive/Rule based
31	*Manual creation SCR/FCR- Site Change request and Filed Change request.*	Automatic/Interactive/Rule based

32	*Manual Revision management- maintaining weld nos. with respect to previous revision, Cloud marking , Files management , addition and deletion/modification of material.*	Automatic/Interactive/Rule based
33	*Manual selection of joints for NDT test as per NDT plan(manual).*	Automatic/Interactive/Rule based
34	*Manual material control between Engineering to procurement and Construction.*	Automatic/Interactive/Rule based

KEY Highlight Points

- Material management with respect to Store, Shop, Field.

- Material Front analysis for Spool fabrication and
- Erection work.

- Looking ahead planning for Spool fabrication and
- Erection work.

- Revision management of Piping Isometrics with respect to stores, Shop and field activities.

- Complete Fabrication Site - activity level project planning, execution and progress updation and monitoring.

- Software can be integrated with all the existing processes and standard practices in Plant construction industry.

- Software can be integrated with in-house standardized software.

- Best practices of all leading plant construction industry are available in the software.

Explanation of key Existing Functions & Events

1. **Manual Spool Marking on PDF Isometric drawings.**

Presently Our Piping Engineers are Printing the Isometric and Manually marking the Spools, Spool Nos, Joint Nos, Shop Joints, Field Joints etc along with Inch-mtr, Inch-dia details on the drawing and getting it multiple copies as per requirement. Then the Final Marked/copied drawings are being issued to Contractor/QA/QC Engineers-productivity will be of Max of 10 to 15 Isometric drawing Per Engineer per Day.

2. **Manual Estimation of Spool wise MTO.**

The Spool which is being fabricated at fabrication Yard will be made of Some part of MTO of total Isometric BOM. All materials Shown in Isometric are not required at fabrication yard like nut bolts, Gaskets, Flanged End Valves etc. Therefore it is necessary to list out the materials required to make Particular Spool to enable store person to issue to the contractor who is going to fabricate the spool. Presently this Spool MTO is being prepared Manually and Hard copy of Spool MTO is being given to contractor as well as our Store Person.-Productivity will be Max of 15 to 20 Iso metric Per day per Engineer.

3. **Manual Estimation of Erection MTO.**

The materials required at site for every Isometric are being estimated manually and information is being conveyed to Store to Prevent issuing these materials to Spool Fabrication Contractor. And Erection Materials are directly issued to Erection Team.-Productivity of this activity will be of between 20 to 30 Isometric Per day Per Engineer.

4. **Manual Preparation of Various construction Reports- Like...IM, IND, Jts….**

Presently Various Reports like Spool wise IND/INM Reports, Fit up reports, Weld Visual Reports, NDT Requirement reports, NDT Reports, No of Jts Reports, Radiography Interpretation Report, Pneumatic Test Report for RF Pads, Positive Material Identification Report, PWHT Report, etc. are being prepared manually which is taking more time. For Each day for Each Iso one Report is required to be prepared and documented Manually. It Requires Lot of Paper work, Papers and Extensive Physical Co-ordination Between Contractor Supervisor, Our Execution Engineer and Our Quality Engineer. Dedicatedly Someone is required to check duplication and he has to check all old reports in each header to avoid duplicity

5. **Manual Adaptation of Revision if ISO is Revised.**

If Some Isometrics are Revised then the All Above procedures from Step-1 are to be repeated along with manual Old isometric comparison.

6. **Manual Comparison of Old Iso/Old fabricated Spool with Revised Isometric and Processing.**

Comparison of New Revised Isometric with old isometric is required to decide/Check Suitability/usage of old spool or old fittings to convert old to New spool. Presently with many Human Error This activity is being done manually which is a time taking process.

7. **Manual Report Preparation Like-Fit up report, Weld Visual, NDT Reports- At Fabrication Yard.**

Fit up reports, Weld Visual Reports, NDT Requirement reports, NDT Reports, No of Jts Reports, Radiography Interpretation Report, Pneumatic Test Report for RF Pads, Positive Material Identification Report, PWHT Report, etc. are being prepared manually presently. It Consumes Lot of paper and Man hrs.

8. **Manual Spool inspection and Release Report.**

Final Spool Inspection Report will be a check point to release the Fabricated spool to Erection Site to ensure all Preceding activities are over. Presently Checking all reports pertaining to the particular spool is being done manually which is a hard core Manual work like Searching all reports and Compiling all into a Single Spool Release Report which are all required again during Mechanical completion of Piping Test Packs/ Loops.

9. **Manual Report Preparation Like-Fit up report, Weld Visual, NDT Reports- At Erection Site.**

As prepared Many Reports during fabrication joints all reports are to be prepared for Erection joints also.

10. **Manual Mechanical Clearance Report.**

Mechanical clearance report will be a collection of so many reports with some additional report line Line History Sheet which will be having all the information and history which were all carried out on behalf of that particular Loop. Apart from this Supports verification, Support welding Reports etc are to be prepared to do the Mechanical Clearance.

11. **Manual Loop Clearance Report.**

Hydro testing Report, NDT Clearance Report etc are the additional requirement to transform the mechanical Clearance Report into Loop Clearance Report.

12. **Manual System Completion Report.**

In order to arrive for this stage System wise-loop wise-Iso Wise Tracking is required. Manual collection of data may mislead as per the present system

13. **Manual Subcontractor Billing Preparation and certification.**

In order to Prepare/Certify Sub Contractors bill Someone have to refer all the documents/ Reports which are all to be prepared manually. Manual Small error may lead to Much cost to Organization.

14. **Manual Creation of Line History Sheet**

“Line History sheet is a report containing the fabrication history of all the weld joints belonging to every piping isometric line. Information of each weld of the line like Weld no., Weld size, welder no., wps no. welding process, fitup report no& date, Weld visual report no. & date, RT/UT/DPT/MPT report no.& date, SR report no. & date, Hardness inspection report no.,& date etc is prepared manually resulting in time loss & human error."

Special Organizational Considerations

- Software licenses are perpetual.
- The same software can be used for any number of projects.
- Efficient resolution of change Management Issues.
- To carry out all above automatically AUTOSPOO and SPOOLMAN/ERMAN Software is required.
- Integration with in-house software and standard software used.
- Automation of all manual work and processes.
- Collaboration/Communication System driven work/Process methodology.
- Single point data for Project/Documents/Company
- Tailor made solutions with focus on pain areas

Description of Business Benefits

1. **Spool Marking on PDF Isometric drawings.**

With One Engineer Around 75 to 100 Isometrics can be Spooled with all required details and with simple logic identity...

2. **Estimation of Spool wise MTO.**

Spool wise MTO list is being prepared along with Spooling in System and no additional Manpower is required and simply Excel Sheet can be downloaded.

3. **Estimation of Erection MTO**

Erection MTO also prepared simply with Software and no addition
Preparation work is reqd.

4. **Preparation of Various construction Reports-Like...IM, IND, Jts….**

Spool wise IND/INM Reports, Fit up reports, Weld Visual Reports, NDT Requirement reports, NDT Reports, No of Jts Reports, Radiography Interpretation Report, Pneumatic Test Report for RF Pads, Positive Material Identification Report, PWHT Report, etc. can be easily extracted from system simply by entering line number/loop number/system number. As much number of records can be accumulated in a single sheet Lot of paper works can be avoided. Duplicity can also be avoided easily.

5. **Adaptation of Revision if ISO is Revised.**

Adaptation of New revisions will be easier with the software. By this lot of work/time/cost can be saved.

6. **Comparison of Old Iso/Old fabricated Spool with Revised Isometric and Processing.**

With the Software the existing spool can be utilized most efficiently to avoid additional material requirement and additional spool fabrication.

7. **Report Preparation Like-Fit up report, Weld Visual, NDT Reports-At Fabrication Yard.**

Fit up reports, Weld Visual Reports, NDT Requirement reports, NDT Reports, No of Jts Reports, Radiography Interpretation Report, Pneumatic Test Report for RF Pads,

Positive Material Identification Report, PWHT Report, etc. can be extracted from software as all those things got updated in system while entering.

8. **Spool inspection and Release Report.**

Final Spool Inspection will be being prepared in software. It refers all the preceding activities reports and transfers all details to the Final Spool Inspection Reports. Spool Release Report which are all required again during Mechanical completion of Piping Test Packs/ Loops.

9. **Report Preparation Like-Fit up report, Weld Visual, NDT Reports-At Erection Site.**

As prepared Many Reports during fabrication joints all reports will be prepared by software for Erection joints also.

10. **Loop Clearance Report.**

Hydro testing Report, NDT Clearance Report etc are the additional requirement to transform the mechanical Clearance Report into Loop Clearance Report.-These activities are totally automated in the software.

11. **System Completion Report.**

In order to arrive for this stage System wise-loop wise-Iso Wise Tracking is required. This can be easily tracked down by Software.

12. **Subcontractor Billing Preparation and Certification.**

Line wise/contractor wise/area wise/loop wise/activity wise measurement sheets for all pay items involved in the Piping job can be extracted from the software. This again forms either measurement or supporting document/Controlling document.

13. **Planning**

Front optimizing work front from limited availability of material, effective & efficient control of piping material with minimum manhours spent. Analyzing to use available material to priority units/lines/loops etc. Front Analysis and Monitoring will be a Key function in this package.

14. **Line History sheet**

"Automatic history tracking of all the welds of the Isometric Line is seamlessly generated from the software. Progress of the joints and the QA/QC activities done

report is very useful to maintain the history. Also the record of the joints cutout and repair is required for the penalty and welder performance in the project"

15. **Welder Performance Report**

"Contractor wise Welder Performance Report can be generated instantly by the software. This report is useful for monitoring the NDT percentages covered, RT repair percentages, Penalty percentages etc."

16. **Progress monitoring Reports**

“Various progress review & progress monitoring reports are available in the software for ready reference. Progress can be monitored against contractor wise, project wise, unit wise, area wise, spec wise & date wise."

17. **Review Reporting/Project Documentation**

Daily progress reports of the fitup and welding done inch dia is required for the progress monitoring at shop and field. Material reconciliation contractor wise is the most painful task at the end of the project. From EPCPROMAN we get the report of the material issue to the Contractor or the Sub contractor at any given time. Material front analysis with respect to the stock available in stores. All required reporting for progress updation/monitoring and till final box up and Dossiser is available as and when required from the software.