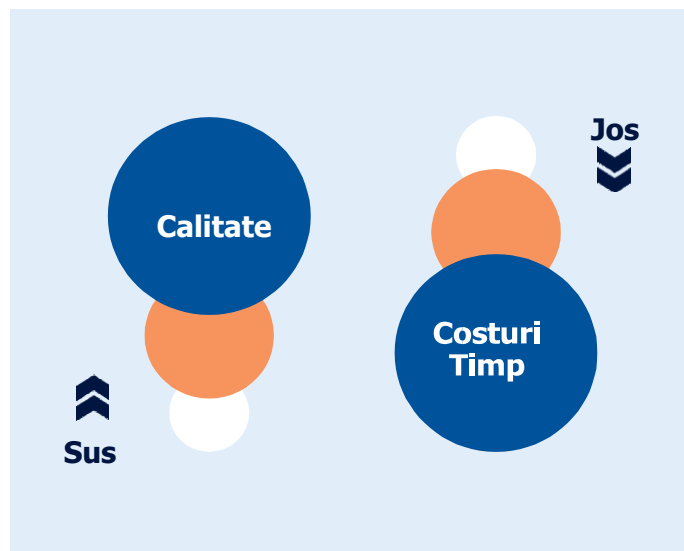
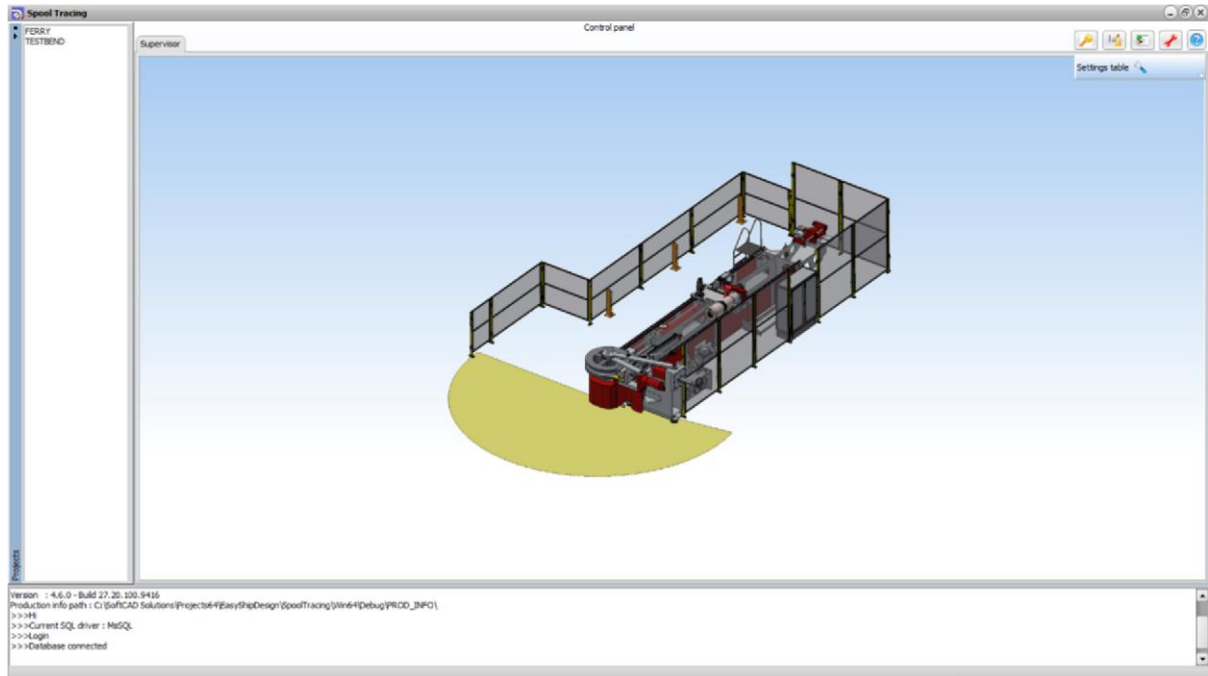


SPOOLTRACING

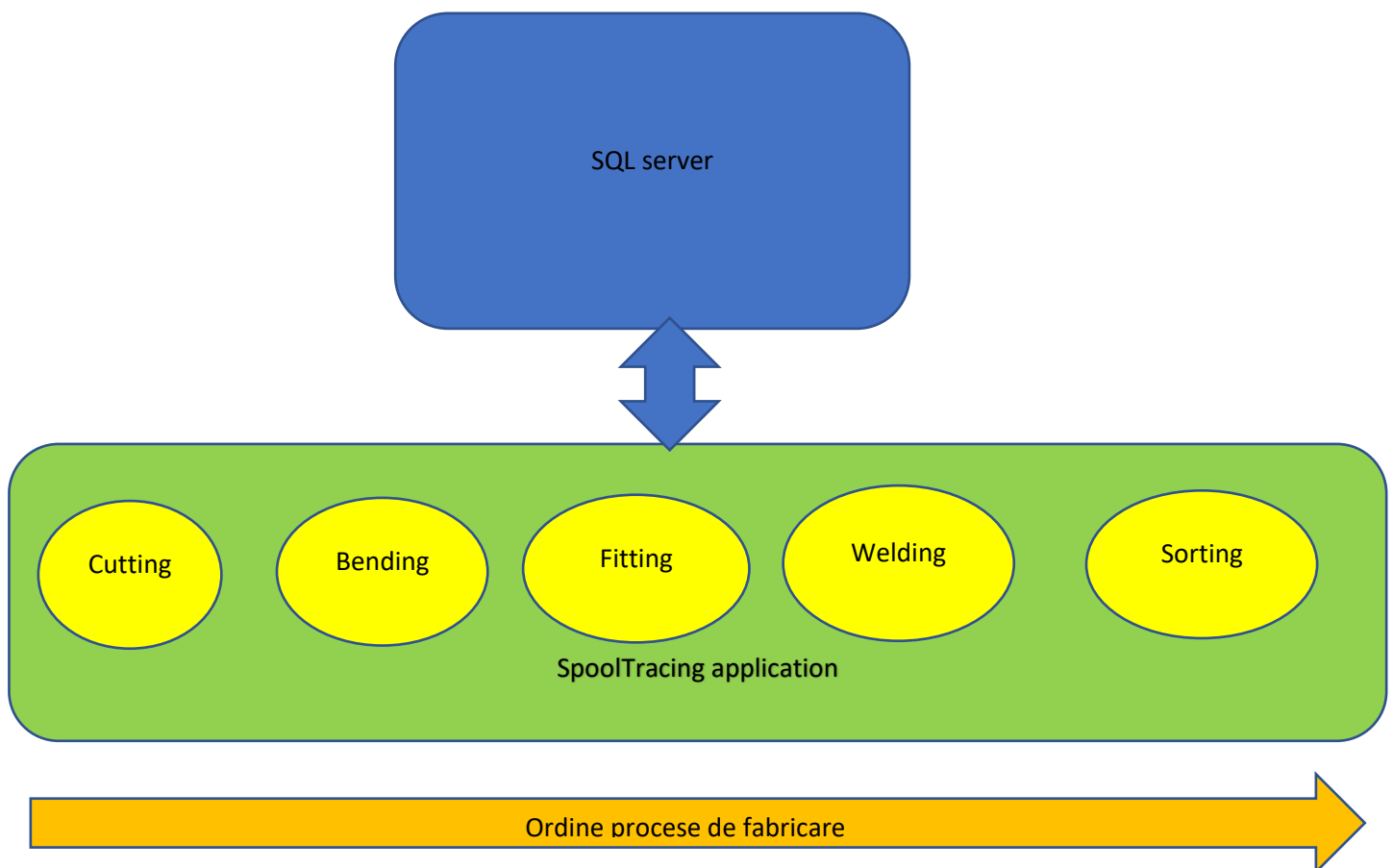


SPOOLTRACING

Aplicatie destinata urmaririi procesului de fabricatie si instalare la nava a spool-urilor.

Arhitectura software este formata din mai multe module integrate intr-o singura aplicatie conectata la un server baze de date SQL, comun

SpoolTracing, inregistreaza procesele de executie (debitare, indoire, fabricare, sudura, conservare, sortare/ stocare, instalare).



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Modul de lucru in aplicatie va fi definit de useri in ordinea proceselor tehnologice astfel:

1.2. Supervisor (sef atelier)

Starteaza productia spool-urilor acestea devenind vizibile la user-ul **Fabrication**.

The screenshot displays the 'Spool Tracing' application interface. On the left, a tree view shows the project structure under '312477' and '31255507'. The main area is a table of spool data. A context menu is open over the table, with 'Start production' selected. The table columns include: PROJEC, ASSEMBLY, PROJEC NAME, SYS, P/LI, FILENAME/REV, FULL_N, PRODUCT, PART_ID, PART_S, PART_C, SPOOL, MEASUF, SHOTEL, GALVAN, GALVAN, PICKLE, OILED, PAINTED, PAINTED, X_RAY, PRESSU, PROVID, MATERI, CLASS, PAGE, SPOOL, REMARK, ARTICLU, MATERI, STAND, SIZE, and NOMIN, EQ_ART.

PROJEC	ASSEMBLY	PROJEC NAME	SYS	P/LI	FILENAME/REV	FULL_N	PRODUCT	PART_ID	PART_S	PART_C	SPOOL	MEASUF	SHOTEL	GALVAN	GALVAN	PICKLE	OILED	PAINTED	PAINTED	X_RAY	PRESSU	PROVID	MATERI	CLASS	PAGE	SPOOL	REMARK	ARTICLU	MATERI	STAND	SIZE	NOMIN	EQ_ART	
312477	31255507	TEST	TEST2																															
312477	31255507	TEST	TEST2																															

Context menu options:

- Start production
- Hold On/Off spools
- Reset user actions
- Refresh tree
- Expand All
- Collapse All
- Open
- Show spool parts

At the bottom, a status bar shows '>>>Login' and '>>>Wrong login input'.

Supervisor poate sa opreasca fabricarea spool-urilor cu functia "Hold ON/OFF" spools.

1.3. Fabrication (maistrul)

Selecteaza proiectul si vizualizeaza toate spool-urile ce au fost eliberate catre productie de seful de atelier. Are posibilitatea de a face filtru pe oricare din coloane. Isi poate stabili singur modul de lucru (pe albume, pe DN, pe tip de material, etc.).

Spool Tracing

312477
21955507
312A8001

TEST
TEST2

Pipe workshop : fabrication

Column title click: dbdik

Filtering: 2D 3D

Refresh Processing status Bend Straight Galvanized Paint More filters

Sorting: None Desc Asc

User name: fabrication Selected: 0

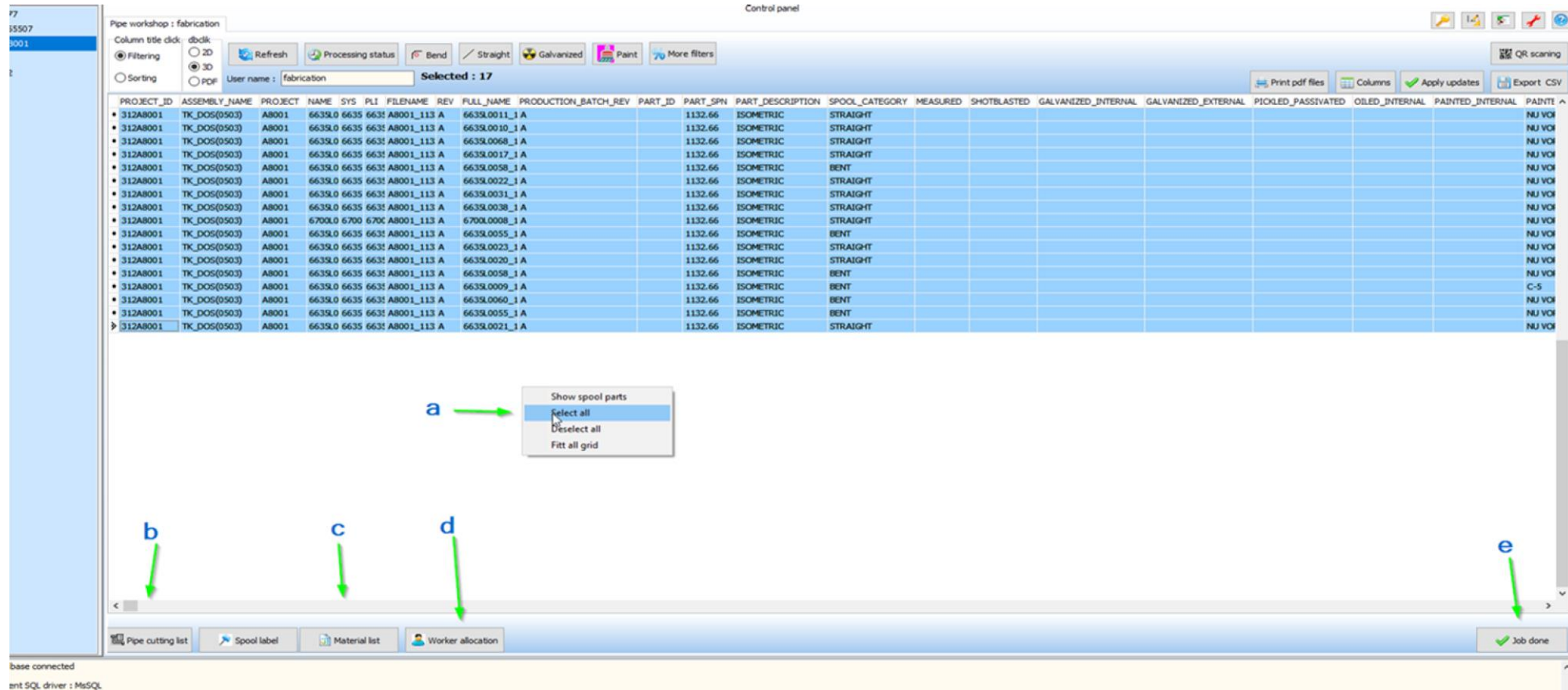
Print pdf file Columns Apply

PROJECT_ID	ASSEMBLY_NAME	PROJECT	NAME	SYS	PLI	FILENAME	REV	FULL_NAME	PRODUCTION_BATCH_REV	PART_ID	PART_SPN	PART_DESCRIPTION	SPOOL_CATEGORY	MEASURED	SHOTBLASTED	GALVANIZED_INTERNAL	GALVANIZED_EXTERNAL	PICKLED_PASSIVATED	OILED_INTERNAL	PA
312A8001	S1152_3470S_P4	A8001	3470L0 3470 347C	A8001_115	A	3470L0900_1_A		3470L0900_1_A			1152.66	ISOMETRIC	BENT							
312A8001	S1144_6650S	A8001	6650L0 6650 665C	A8001_114	A	6650L0015_1_A		6650L0015_1_A			1144.66	ISOMETRIC	BENT			X	X			
312A8001	S1152_3470S_P3	A8001	3470L0 3470 347C	A8001_115	A	3470L0800_1_A		3470L0800_1_A			1152.66	ISOMETRIC	BENT							
312A8001	S1122_6635S_P3	A8001	6635L0 6635 663C	A8001_112	A	6635L0052_1_A		6635L0052_1_A			1122.66	ISOMETRIC	STRAIGHT							
312A8001	S1113_6650S	A8001	6650L0 6650 665C	A8001_111	A	6650L0037_1_A		6650L0037_1_A			1113.66	ISOMETRIC	BENT			X	X			
312A8001	S1141_6620S	A8001	6620L0 6620 662C	A8001_114	A	6620L0009_1_A		6620L0009_1_A			1141.66	ISOMETRIC	BENT							
312A8001	S1133_6630S_P2	A8001	6630L0 6630 663C	A8001_113	A	6630L0019_1_A		6630L0019_1_A			1133.66	ISOMETRIC	BENT							
312A8001	S1162_6635S_P1	A8001	6635L0 6635 663C	A8001_116	A	6635L0077_1_A		6635L0077_1_A			1162.66	ISOMETRIC	STRAIGHT							
312A8001	S1122_6620S_P1	A8001	6620L0 6620 662C	A8001_112	A	6620L0003_1_A		6620L0003_1_A			1122.66	ISOMETRIC	STRAIGHT							
312A8001	S1132_6655S_P1	A8001	6655L0 6655 665C	A8001_113	A	6655L0001_1_A		6655L0001_1_A			1132.66	ISOMETRIC	STRAIGHT							
312A8001	S1143_3470S_P2	A8001	3470L0 3470 347C	A8001_114	A	3470L0300_1_A		3470L0300_1_A			1143.66	ISOMETRIC	BENT							
312A8001	S1345_3470S_P2	A8001	3470L0 3470 347C	A8001_134	A	3470L0600_1_A		3470L0600_1_A			1345.66	ISOMETRIC	STRAIGHT							
312A8001	S1141_6670S	A8001	6670L0 6670 667C	A8001_114	A	6670L0007_1_A		6670L0007_1_A			1141.66	ISOMETRIC	BENT							
312A8001	S1122_6644S	A8001	6644L0 6644 664C	A8001_112	A	6644L0013_1_A		6644L0013_1_A			1122.66	ISOMETRIC	STRAIGHT							
312A8001	S1133_6635S	A8001	6635L0 6635 663C	A8001_113	A	6635L0036_1_A		6635L0036_1_A			1133.66	ISOMETRIC	BENT							
312A8001	S1122_6620S_P2	A8001	6620L0 6620 662C	A8001_112	A	6620L0025_1_A		6620L0025_1_A			1122.66	ISOMETRIC	STRAIGHT							
312A8001	S1132_6640S_P5	A8001	6640L0 6640 664C	A8001_113	A	6640L0060_1_A		6640L0060_1_A			1132.66	ISOMETRIC	STRAIGHT							
312A8001	TK_FO_03(0403)_F	A8001	6620L0 6620 662C	A8001_115	A	6620L0039_1_A		6620L0039_1_A			1152.66	ISOMETRIC	BENT							
312A8001	S1132_6655S_P1	A8001	6655L0 6655 665C	A8001_113	A	6655L0001_1_A		6655L0001_1_A			1132.66	ISOMETRIC	STRAIGHT							
312A8001	S1132_6650S	A8001	6650L0 6650 665C	A8001_113	A	6650L0010_1_A		6650L0010_1_A			1132.66	ISOMETRIC	BENT			X	X			
312A8001	S1141_6644S_P1	A8001	6644L0 6644 664C	A8001_114	A	6644L0003_1_A		6644L0003_1_A			1141.66	ISOMETRIC	BENT							
312A8001	S1345_3639S	A8001	3639L0 3639 363C	A8001_134	A	3639L0076_1_A		3639L0076_1_A			1345.66	ISOMETRIC	STRAIGHT							
312A8001	S1132_6620S_P7	A8001	6620L0 6620 662C	A8001_113	A	6620L0070_1_A		6620L0070_1_A			1132.66	ISOMETRIC	BENT							
312A8001	S1335_6710S_P2	A8001	6710L0 6710 671C	A8001_133	A	6710L0520_1_A		6710L0520_1_A			1335.66	ISOMETRIC	STRAIGHT							
312A8001	S1133_6695S	A8001	6695L0 6695 669C	A8001_113	A	6695L0005_1_A		6695L0005_1_A			1133.66	ISOMETRIC	STRAIGHT							
312A8001	S1123_5102S_P2	A8001	5102L0 5102 510C	A8001_112	A	5102L0358_1_A		5102L0358_1_A			1123.66	ISOMETRIC	STRAIGHT							
312A8001	S1143_3600S_P2	A8001	3600L2 3605 360C	A8001_114	A	3600L2019_1_A		3600L2019_1_A			1143.66	ISOMETRIC	MITER							
312A8001	S1152_3470S_P3	A8001	3470L0 3470 347C	A8001_115	A	3470L0800_1_A		3470L0800_1_A			1152.66	ISOMETRIC	STRAIGHT							
312A8001	S1154_3640S	A8001	3640L0 3640 364C	A8001_115	A	3640L0002_1_A		3640L0002_1_A			1154.66	ISOMETRIC	STRAIGHT							
312A8001	S1123_5102S_P2	A8001	5102L0 5102 510C	A8001_112	A	5102L0360_1_A		5102L0360_1_A			1123.66	ISOMETRIC	BENT							
312A8001	S1143_3470S_P3	A8001	3470L0 3470 347C	A8001_114	A	3470L0500_1_A		3470L0500_1_A			1143.66	ISOMETRIC	STRAIGHT							
312A8001	S1113_6710S_P4	A8001	6710L0 6710 671C	A8001_111	A	6710L0350_1_A		6710L0350_1_A			1113.66	ISOMETRIC	STRAIGHT							
312A8001	S1132_6644S_P1	A8001	6644L0 6644 664C	A8001_113	A	6644L0003_1_A		6644L0003_1_A			1132.66	ISOMETRIC	STRAIGHT							
312A8001	S1133_6700S_P2	A8001	6700L0 6700 670C	A8001_113	A	6700L0006_1_A		6700L0006_1_A			1133.66	ISOMETRIC	STRAIGHT							
312A8001	S1162_3639S_P1	A8001	3639L0 3639 363C	A8001_116	A	3639L0157_1_A		3639L0157_1_A			1162.66	ISOMETRIC	STRAIGHT							
312A8001	S1122_6615S	A8001	6615L0 6615 661C	A8001_112	A	6615L0019_1_A		6615L0019_1_A			1122.66	ISOMETRIC	STRAIGHT							
312A8001	S1143_3470S_P3	A8001	3470L0 3470 347C	A8001_114	A	3470L0600_1_A		3470L0600_1_A			1143.66	ISOMETRIC	STRAIGHT							

Dupa filtrare se efectueaza urmatoorii pasi :

1. Click dreapta->Select all (pentru selectarea spool-urilor dorite);
2. Click buton "Pipe cutting list" (pentru generarea listelor de debitare si a listei de etichete, lista ce va fi atasata in email pentru a fi transmisa catre calculatorul conectat la masina de etichete);


3. Butonul “Material list”, este optional, pentru vizualizarea materialelor necesare pentru fabricarea spool-urilor selectate;
4. Butonul “Job done” da posibilitatea maistrului de a finaliza “manual” procesul de fabricare a spool-ului pana la etapa de sudare.



1.4. Cutting (procesul de debitare tevi)

Acest proces dispune de scanner PowerScan PBT ca cel de mai sus (setat cu prefixul 11111).



	A	B	C	D	E	F	G	H	I	J	K	L	M		
1						Lista taieturi tev	42								
2															
3															
4															
5															
6															
7															
8															
9															
10	Grup materiale INOX														
11	Bara stanc	Lungime [m]	Lungime [m]	Pierdere [m]	Album/Pa	Dimensiune	Lungime [m]	Material	Bev capat:	Bev capat:	Indoire	Cod vopsire			
12	1006489_3	6000	5453.5	546.5											
13					TK_DOS(0	42.16X2.77	2048	INOX	Yes			INDOIT			
14					TK_DOS(0	42.16X2.77	2328	INOX	Yes			INDOIT			
15					TK_DOS(0	42.16X2.77	1070	INOX				INDOIT			
16	1006489_4	6000	1072.5	4927.5											
17					TK_DOS(0	42.16X2.77	1070	INOX				INDOIT			
18	1006490_5	6000	1228.5	4771.5											
19					TK_DOS(0	48.26X2.77	1226	INOX				INDOIT			
20															
21	Artcode	Mansoane	Lungime	Buc	Material										
22	1209828	60.3X8.74	100	2	INOX										
23															
24															
25															

Dupa finalizarea debitarii se scaneaza codul QR aferent listei de debitare.

1.5.

Bending (procesul de indoire)

Acest proces dispune de monitoare cu touchscreen de 22 inch. Dupa selectarea proiectului vor aparea spool-urile ce necesita indoire.

Vizualizarea informatiilor de indoire se poate face in 3 moduri:

- a. Schita PDF;
- b. Modul 2D (similar AutoCAD);
- c. Modul 3D.



1.6.

The screenshot displays the Spool Tracing application window. On the left, a 'Projects' sidebar lists '312477', '31255507', and '312A8001' (highlighted). The main area shows a table with columns: PROJECT_ID, ASSEMBLY_NAME, PROJECT, NAME, SYS, PLI, FILENAME, REV, FULL_NAME, PRODUCTION_BATCH_REV, PART_ID, PART_SPN, PART_DESCRIPTION, SPOOL_CATEGORY, MEASURED, SHOTBLASTED, GALVANIZED_INTERNAL, GALVANIZED_EXTERNAL, PICKLED_PASSIVATED, OILED_INTERNAL, PAINTED_INTERNAL, and PAINTED. The table contains several rows of data for project 312A8001. A 'Control panel' at the top includes buttons for 'Refresh', 'Processing status', 'Bend', 'Straight', 'Galvanized', 'Paint', and 'More filters'. A 'Job done' button is located in the bottom right corner.

SELECTIE PROIECT

SELECTIE MOD VIZUALIZARE

FINALIZARE PROCES INDOIRE

Job done

Dupa finalizare proces indoire se apasa „Job done”.

1.7.

Fitting (procesul de asamblare a spool-ului)

Acest proces dispune de monitoare cu touchscreen de 22 inch.

Fiecare „fitter” are cont definit si este necesara logare personalizata.

Dupa selectarea proiectului acesta va vedea toate spool-urile alocate catre el.

Vizualizarea spool-ului se poate face in 3 moduri:

- d. Schita PDF;
- e. Modul 2D (similar AutoCAD);
- f. Modul 3D.

Dupa finalizare se apasa „Job done”.



1.8.

The screenshot shows the Spool Tracing application interface. On the left, a tree view contains project identifiers: 312477, 312555507, 312A8001 (highlighted with a green box), TEST, and TEST2. A green arrow points from this box to a blue box labeled "SELECTIE PROIECT".

The main area is a data table with columns: PROJECT_ID, ASSEMBLY_NAME, PROJECT, NAME, SYS, PL1, FILENAME, REV, FULL_NAME, PRODUCTION_BATCH_REV, PART_ID, PART_SPN, PART_DESCRIPTION, SPOOL_CATEGORY, MEASURED, SHOTBLASTED, GALVANIZED_INTERNAL, GALVANIZED_EXTERNAL, PICKLED_PASSVATED, OILED_INTERNAL, PAINTED_INTERNAL, and PAINTI. The row for 312A8001 is selected. A green arrow points from this row to a blue box labeled "SELECTIE MOD VIZUALIZARE".

At the bottom right, a green box contains a checkmark and the text "Job done". A green arrow points from this box to a blue box labeled "FINALIZARE PROCES".

Other interface elements include a "Pipe workshop : fitting" tab, a "Control panel" with buttons for Refresh, Processing status, Bend, Straight, Galvanized, Paint, and More filters, and a "User name : ludorache.eugen" field. A "Selected : 1" indicator is also present.

1.9.

Welding (procesul de sudare)

Acest proces dispune de scanner personalizat pentru fiecare sudor (prefixul scanner-ului este dat de marca sudorului).

Dupa incheierea sudurii se va scana codul QR al etichetei pentru finalizarea procesului. Finalizarea se poate face si de catre maistru, apasand butonul „Job done” din contul lui.

In cazul in care sudorul nu este certificat pentru procedeul folosit va aparea un mesaj de atentionare pe ecranul maistrului. Acesta va fi inregistrat si in baza de date, unde mai regasim: materialele folosite, numarul si lungimea cordoanelor de sudura si WPS-ul.



1.8. Treatment (procesul de conservare/ tratament)

Procesul dispune de un scanner Zebra TC8300 cu prefixul 22222 (pentru otel) si un al doilea cu prefixul 33333 (pentru inox).

Finalizarea procesului se poate face fie din calculatorul maistrului prin apasarea butonului „Job done” fie prin scanarea codului QR de pe eticheta spool-ului, dupa finalizarea tratamentului.

1.9. Storage (procesul de sortare si depozitare/ stocare)

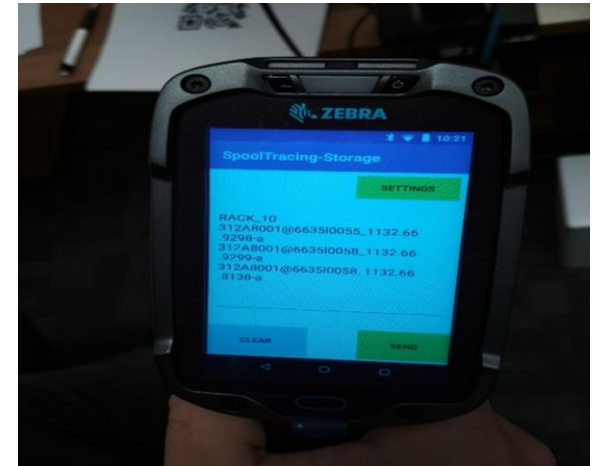
Procesul dispune de 2 scannere ZEBRA (cu display) care necesita cont de logare.

Este necesar definirea de coduri QR pentru fiecare container/rack.

Modul de operare:

- a. Se scaneaza codul QR al containerului/rack-ului;
- b. Se scaneaza spool-urile care se doresc a fi depozitate in acel rack si se apasa „Send ” (in acest moment spool-urile apartin rack-ului respectiv);
- c. Pentru a vizualiza pe display-ul scannerer-ului spool-urile ce apartin unui rack, se scaneaza codul QR al rack-ului si se apasa „Send ”.

Atunci cand spool-urile vor fi solicitate de catre atelierul Montaj, cei de la Storage vor selecta spool-urile indicate cat si persoana care a facut solicitarea si vor apasa butonul „job done”.



1.10.

Pipe workshop : storage

Column title click: dbclick

Filtering: 2D, 3D, PDF

Sorting: Refresh, Processing status, Bend, Straight, Galvanized, Paint, More filters

User name: storage Selected: 6

PROJECT_ID	ASSEMBLY_NAME	PROJECT	NAME	SYS	PLI	FILENAME	REV	FULL_NAME	PRODUCTION_BATCH_REV	PART_ID	PART_SPN	PART_DESCRIPTION	SPOOL_CATEGORY	MEASURED	SHOTBLASTED	GALVANIZED_INTERNAL	GALVANIZED_EXTERNAL	PICKLED_PASSIVATED	OILED_INTERNAL	PAINTED_INTERNAL	PAINTED_EXTERNAL
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0091	A		1161.66	ISOMETRIC	STRAIGHT								D-5
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0096	A		1161.66	ISOMETRIC	STRAIGHT								NU VO
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0090	A		1161.66	ISOMETRIC	STRAIGHT								D-5
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0092	A		1161.66	ISOMETRIC	STRAIGHT								D-5
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0096	A		1161.66	ISOMETRIC	STRAIGHT								D-5
312A8001	VOID_04_CL(0.10)	A8001	6655L0	6655	6655	A8001_116	A	6655L0023	A		1161.66	ISOMETRIC	STRAIGHT								NU VO

Rack allocation Show tree racks Racks table

Location: Costel_Radu, Cristi_Burada, Ionut_Rosioru, Marian_Necula, Costica_Peptanar, Stefan_Goianu, Vlad_Sorea, Laurentiu_Ghincea

Job done

Install (procesul de montare si testare a spool-urilor la nava)

Selecteaza proiectul si vizualizeaza toate spool-urile ce au fost eliberate catre productie de catre departamentul Proiectare si Suport Productie. Poate solicita cu prioritate anumite spool-uri, acest lucru se face prin butonul „Request spool” (acestea vor capata culoarea portocalie) si in acelasi timp se va genera e-mail-ul cu prioritati.

Modul de operare pentru spool-urile ce au status-ul „Delivered to install”:

- Finalizarea instalarii spool-ului, prin apasarea butonul „Install done”;
- Predarea tehnica a spool-ului, prin apasarea butonul „Technical inspected”;
- Predarea etansa a spool-ului, prin apasarea butonul „Tightness tested”.

1.11.

The screenshot shows a software interface for managing spool requests. The main window is titled "Control panel" and contains a table of spool data. The table has columns for PROJECT_ID, ASSEMBLY_NAME, PROJECT, NAME, SYS, P/LI, FILENAME, REV, FULL_NAME, PRODUCTION_BATCH_REV, PART_ID, PART_SPN, PART_DESCRIPTION, SPOOL_CATEGORY, MEASURED, SHOTBLASTED, GALVANIZED_INTERNAL, GALVANIZED_EXTERNAL, PICKLED_PASSIVATED, OILED_INTERNAL, PAINTED_INTERNAL, and PAINTED. A filtering dialog box is open, showing a checkbox for "Delivered to install". The status bar at the bottom has buttons for "Request spool", "Install done", "Technical inspected", and "Tightness tested".

Annotations in blue boxes with arrows point to the following elements:

- SELECTIE PROIECT**: Points to the project tree on the left.
- SOLICITARE CU PRIORITATE SPOOL-URI**: Points to the "Request spool" button in the status bar.
- FINALIZARE INSTALARE**: Points to the "Install done" button in the status bar.
- PREDARE TEHNICA**: Points to the "Technical inspected" button in the status bar.
- PREDARE ETANSA**: Points to the "Tightness tested" button in the status bar.

Manager

Acest user vede tabelul cu spooluri read only si poate filtra informatia, click header coloana.

1.12.

The screenshot displays the Spool Tracing application interface. The main window is titled "Spool Tracing" and contains a "Control panel" at the top with various icons and buttons like "Refresh", "Processing status", "Bend", "Straight", "Galvanized", "Paint", and "More filters". Below the control panel is a data grid with columns: PROJECT_ID, ASSEMBLY_NAME, PROJECT, NAME, SYS, PLI, FILENAME, REV, FULL_NAME, PRODUCTION_BATCH_REV, PART_ID, PART_SPN, PART_DESCRIPTION, SPOOL_CATEGORY, MEASURED, SHOTBLASTED, GALVANIZED_INTERNAL, and GALVANIZED_EXTERN. A "Filtering" dialog box is open over the grid, showing a list of items to filter: COMP_SUN_DECK_P1, S102_351-01S, and TK_1_FO_B2. The dialog has "Cancel" and "OK" buttons. At the bottom of the application, there is a command window with the following text:

```
>>>Login
>>>Database connected
>>>Hi
>>>Current SQL driver : MsSQL
>>>Login
>>>Database connected
```

In orice moment se poate exporta ce este in grid in format „csv” pentru alte procesari, rapoarte, etc.

Generalitati

1.13.

In orice moment se poate vedea status-ul spool-rilor.

Codul culorilor este urmatorul :

- Neprocesat (negru);
- In lucru (albastru);
- Solicitat de catre montaj cu prioritate (portocaliu);
- Finalizat si instalat la nava (albastru verzui deschis); Anulat din revizie noua (rosu); Oprit prin hold (maro).

The screenshot displays the 'Spool Tracing' application window. The main area is a table with columns: PROJECT_ID, ASSEMBLY_NAME, PROJECT, NAME, SYS, PLI, FILENAME, REV, FULL_NAME, PRODUCTION_BATCH_REV, PART_ID, PART_SPN, PART_DESCRIPTION, SPOOL_CATEGORY, MEASURED, SHOTBLASTED, and GA. The table contains multiple rows of data, with some cells highlighted in different colors (black, blue, orange, light blue, red, maroon) corresponding to the status legend. The interface includes a 'Control panel' at the top with buttons for 'Filtering', 'Sorting', 'Fitt grid', 'Columns', 'Processing status', 'Bend', 'Straight', 'Galvanized', and 'Paint'. A 'Find node by text contains' search box is on the left. The bottom status bar shows '0 items selected' and a command prompt with the following text: >>>Apply updates, >>>Process stored, >>>H, >>>Current SQL driver : MsSQL, >>>Login, >>>Database connected.

Date tehnice ale dispozitivelor

1.14.

1.14.1 22 inch touchscreen metal

This Full HD 22 inch touchscreen has a reliable multi-touch panel which ensures accurate operation. The 22TS7M delivers best-in-class picture quality with excellent 178° viewing angles and is compatible with Windows, Mac, Linux & Android operating systems. The touchscreen monitor is designed for professional applications, easy to integrate and suitable for intensive use.

- ✓ Full HD multi-touch panel
- ✓ Windows, Mac, Linux & Android compatible
- ✓ Desktop, flush and wall mountable
- ✓ 522 x 317 x 43 mm



PANEL	
Type	LED-IPS
Screen diagonal	21.6 inches (548 mm)
Aspect ratio	16:9 (4:3 adjustable)
Native resolution	1920 x 1080
Supported resolutions	1920 x 1080 (max), 640 x 480 (min)
Pixels per inch	100 PPI
Viewing angle	178° horizontal, 178° vertical
Colour encoding system	PAL/NTSC/SECAM
Brightness	250 cd/m2
Contrast	3000:1
Touch technology	Capacitive, 10-point multitouch (PCAP)
Control	Stylus, hand, glove

CONNECTIVITY	
HDMI	✓ 1x
VGA	✓ 1x
BNC (CVBS)	✓ 1x
RCA video	✓ 1x
AUX input	✓ 1x
AUX output	✓ 1x
USB	✓ Only for touchscreen functionality

1.14.2 ROLINE LCD Monitor Stand Pneumatic, Desk Clamp, Pivot

LCD monitor arm, for easy and reliable adjustment of a monitor weighing up to 15kg (weight adjustment between 1kg and 15kg) and VESA 75/100!

- Delicate and streamlined design
- Made of high quality aluminum alloy
- Gas spring integrated allows users to move the LCD panel in most positions at will
- Meets VESA 75 (75x75 mm) or VESA 100 (100x100 mm)
- Special feature: Pivot function - screen is 90 degrees rotatable
- Small desktop mount saves space
- A clever cable management is built into the rear arm

Specifications:

- Arm extension: ~ 526mm
- Monitor pivot: 180°
- Rotation: 180° (arm & display)
- Loading capacity: <=15kg



Quick-Release VESA Plate
mount or remove the monitor
in mere seconds



Built-In Cable Management
for a clutter-free look



Rotation Limit Setting
prevents the monitor from extending
past the rear edge of desk

1.14.3 ThinkStation P340 Tiny



KEY SPECIFICATIONS

Processor	up to 10th Gen Intel Core i9 processor
Operating System	Powered by Windows 10 Pro
Max Graphics	Intel UHD graphics or optional NVIDIA Quadro P620, 2GB or NVIDIA Quadro P1000, 4GB
Memory	up to 64GB DDR4-2933 non-ECC
Max Storage Drives	M.2 SSD: 4TB (2x 2TB M.2 PCIe NVMe SSD)
Storage Types Supported	up to M.2 PCIe NVMe SSD up to 4TB
Power Supply	One of the following 170W 89% Power Adapter 230W 89% Power Adapter
Dimensions	Width: 37mm (1.5") Depth: 182.9mm (7.2") Height: 179mm (7")
Weight	Max weight: 1.4kg (3lbs)

GREEN CERTIFICATIONS

GREENGUARD. EPEAT Gold rating. ENERGY STAR 8.0

OTHER CERTIFICATIONS

MIL-STD-810G military testing

CONNECTIVITY

Front I/O	1x USB 3.2 Gen 2 (charging), 1x USB-C 3.2 Gen 1, audio combo jack
Rear I/O	2x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, ethernet (RJ-45), DisplayPort, HDMI
Optional Rear Ports	One of the following 1x DP 1x HDMI 1x USB-C 1x VGA 1x serial 1x serial + 1x DP
WLAN + Bluetooth	One of the following Intel 9560 11ac, 2x2 + BT5.0 Intel AX201 11ax, 2x2 + BT5.1 RTL8822CE 11ac, 2x2 + BT5.0

SECURITY & PRIVACY

Kensington lock slot
Chassis intrusion switch
TPM 2.0

MANAGEABILITY

Intel vPro with AMT 14
Non-vPro

1.14.4 PowerScan PBT9501

Datalogic PowerScan PBT9501 este un cititor care ofera o colectare de date rapida si intuitiva, fara a fi necesara depunerea unui efort mare. Acest model de cititor imbină scanarea omnidirectionala cu caracteristici optice de exceptie, lucru ce duce la obtinerea unui scaner care poate citi orice cod de bare, indiferent de orientare, de la o distanta de pana la un metru (distanta de scanare poate varia in functie de rezolutia codului de bare).



Cititoarele din seria **PBT9501** beneficiaza de tehnologia Datalogic STAR Cordless System, care le permite acestora sa comunice informatiile citite cu ajutorul tehnologiilor Bluetooth, Wireless si Radio, fara a mai fi nevoie sa utilizati cabluri la punctul de lucru. Acest cititor poate detecta miscarile operatorului , schimbând mod-ul de scanare in functie de necesitati.

Principalele caracteristici

Tip scanare	1D, 2D, DPM
Forma	portabil
Conectivitate	fara fir
Tehnologie scanare	imager, high density
Interfata conexiune	USB
Tip comunicare	Bluetooth 3.0 (range 90m)
Rezistenta	industrial, clasa de protectie: IP65; rezistenta la caderi: multiple, de la 2 m; rezistenta la descarca electrostatice: 20 kV aer.
Coduri de bare	1D: toate simbologiile standard, inclusiv GS1 DataBar; 2D: Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; C Coduri postale: Australian Post; China Post; IMB; Japanese Post; KIX Post; Plane Stacked codes: EAN/JAN Composites; GS1 DataBar Composites; GS1 DataBar E; Omnidirectional; MacroPDF; MicroPDF417; PDF417; UPC A/E Composites; DPM.
Temperatura de operare	-20°C – +50°C
Alimentare	800 mA @ 10 VDC; functionare: 150 mA @ 10 VDC.
Altele	baterie: Li-Ion, 2150 mAh, timp de incarcare: 4 ore (alimentare externa); timp de functionare: pana la 10 ore; tehnologie Motionix; sistem 3GL - alerte sonore si luminoase la scanari reusite.
Dimensiuni	21.2 x 11 x 7.4 cm
Greutate	0.38 kg
Culoare	negru/galben

1.14.5 Zebra TC 8300 DPM

Zebra TC8300 este proiectat special pentru a citi **coduri de bare 2D si DPM**, si are scopul de a revolutiona tehnologia terminalelor mobile. Acesta sporeste productivitatea lucratorilor, functionand in asa fel incat este nevoie de mai putine interactiuni pentru a duce la capat operatiunile propuse, poate citi coduri de bare 1D si 2D.

Scannerul este protejat impotriva zgarieturilor cu un ecran Corning® Gorilla® Glass. Ecranul mare de 4" le permite utilizatorilor sa scaneze fara a mai fi nevoie sa incline ecranul pentru a verifica daca citirea s-a facut corect. Astfel, viteza de lucru creste, la fel ca si eficienta angajatilor

Proiectia lui **TC8300** este gandita in asa fel incat sa reziste caderilor pe beton de la 2.4m cand opereaza la temperatura camerei, conform standardului MILSTD 810G, iar atunci cand opereaza la limita parametrilor de temperatura, rezista caderilor pe beton de la 1.8m. TC8300 face fata la 2000 de rostogoliri consecutive de la distanta de 1m.

Experienta de computer portabil este redata cu ajutorul procesorului puternic Dual Core, de 1.7 GHz, acompaniat de o memorie RAM de 1GB. Nici memoria Flash nu se lasa mai prejos, aveti la dispozitie 4GB pentru stocare de date. Toate acestea functioneaza in cele mai dificile conditii de lucru.

Acest dispozitiv mobil face fata cu brio chiar si atunci cand temperaturile se schimba brusc de la rece la cald si invers (40°C la 70°C), asa ca va veti bucura de un produs revolutionar fara grija investitiilor suplimentare pentru intretinerea lui.

Vestile bune nu se termina aici, TC8300 nu trebuie inchis atunci cand este nevoie sa schimbati bateria Lithium ion 7000 mAh, deci continuitatea operatiunilor nu va fi afectata si nu veti risca sa pierdeti date importante.

Tip terminal	Telefon
Procesor	Qualcomm Octa Core, 2.2 GHz
Memorie	4 GB RAM / 32 GB Flash
Ecran	4"
Tehnologie scanare	1D / 2D Imager DPM (Direct Part Marking)
Sistem de operare	Android 8.1 (Oreo)
Conectivitate	Bluetooth, Wireless, 3G
Slot-uri externe	Card MicroSD
Baterie	Lithium ion 7000 mAh
Standard de protectie	IP65
Temperatura de operare	- 40°C pana la 70° C
Dimensiuni	233 mm L x 76 mm W x 64 mm
Greutate	500g

Server pentru baza de date SQL , similar ca ma jos sau mai mult, plus sursa UPS.

Server DELL PowerEdge T150 Tower 4U, Intel Xeon E-2314 (4 C / 4 T, 2.8 GHz - 4.5 GHz, 8 MB cache, 65 W), 32 GB DDR4 ECC, 2 x 2 TB HDD + 2 x 480 GB SSD, 4 x LFF, 300 W



Pentru tiparit etichete QR code rola

PM42

Industrial Label Printer

The Honeywell PM42 mid-range industrial label printer is designed for maximum reliability and uptime. With a durable construction and an intuitive, user-friendly interface, it's ideal for distribution center, warehouse, manufacturing, transportation and retail environments.

Unlike competitive printers that incorporate plastic components, the PM42 printer features an all-metal, die-cast aluminum construction for enhanced durability and reliability in the harshest industrial environments. With a magnetic quick-mount printhead – designed for quick removal without tools – and an easily removable print roller – the PM42 printer minimizes downtime and reduces maintenance costs.

With a full-color, graphical display including 9 user-selectable languages, the PM42 is intuitive and easy to use, reducing your workforce training and device support needs. And workers can easily manage their printing jobs from nearby or afar with the printer's integrated web interface, which enables easy setup, monitoring and configuration through mobile devices including tablets and smartphones.

The PM42 printer provides fast, high-volume industrial thermal printing, making it an affordable choice for organizations printing 5,000–15,000 labels per day. With its class-leading print speeds up to 300 mm/s (12 ips), you'll gain a clear productivity advantage. And with its Smart Printing technology – delivered through Honeywell C# for Printers and Fingerprint – you can run apps, print labels and



The Honeywell PM42 label printer incorporates class-leading industrial printing, superior durability and rich features into an affordable and easy-to-use package.

even control other devices directly from the printer, without the need for a connected PC.

The user-selectable, all-in-one programming language included in every PM42 printer enables it to fit easily into most IT infrastructures, deploying quickly into existing Honeywell or mixed printer environments.