
TEKFEN
TEKFEN CONSTRUCTION
PIPE TRACKING SYSTEM
TEKFEN

Major Business Areas

Pipelines

Oil & Gas Platforms

Refineries

Petrochemical Complexes

Jetties

Power Plants

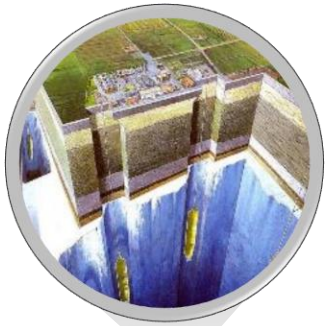
Storage Tanks

Motorways

Bridges

Stadiums

High-Rises

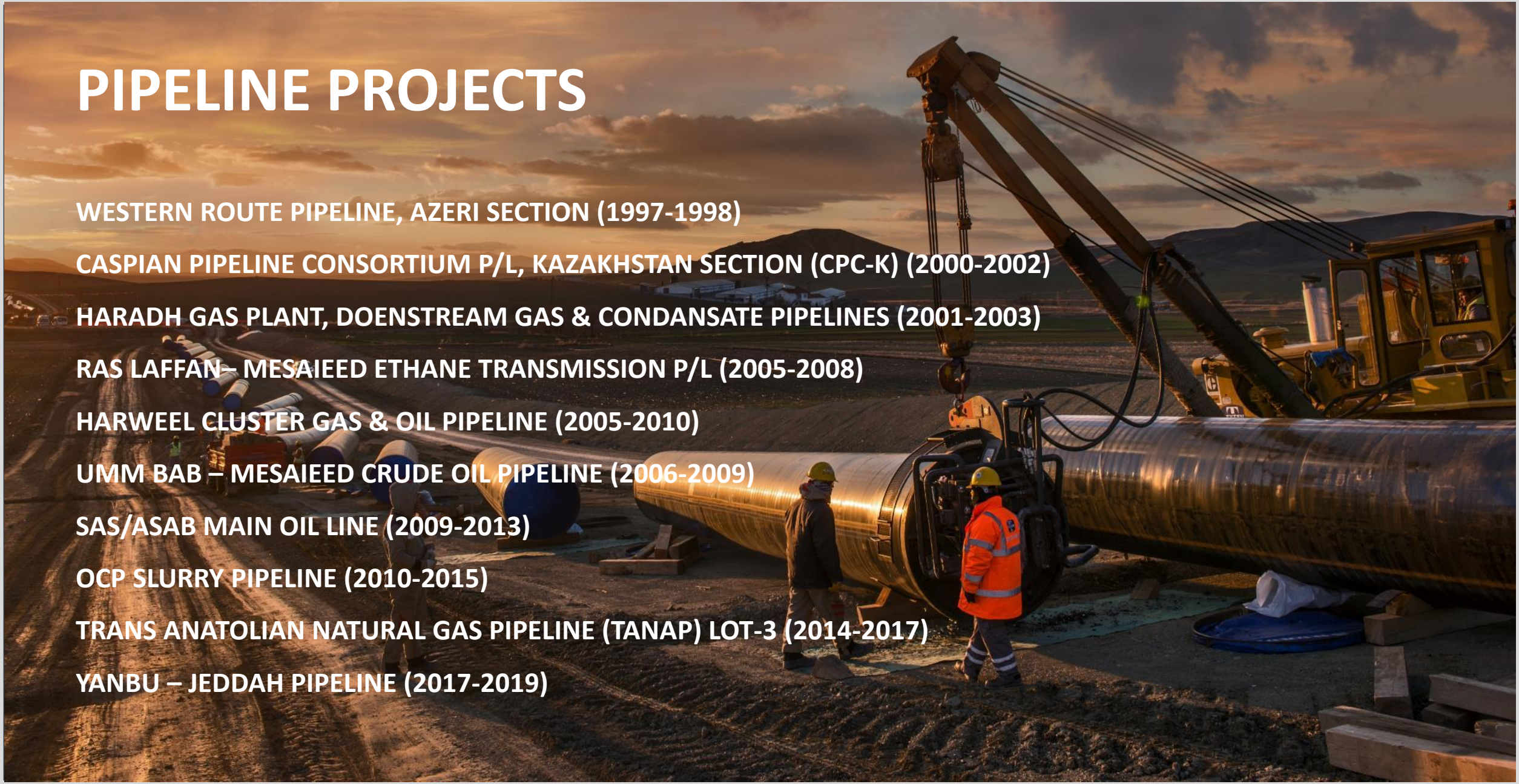


UGS's

Railways

Tunnels

PIPELINE PROJECTS



WESTERN ROUTE PIPELINE, AZERI SECTION (1997-1998)

CASPIAN PIPELINE CONSORTIUM P/L, KAZAKHSTAN SECTION (CPC-K) (2000-2002)

HARADH GAS PLANT, DOENSTREAM GAS & CONDANSATE PIPELINES (2001-2003)

RAS LAFFAN– MESAIEED ETHANE TRANSMISSION P/L (2005-2008)

HARWEEL CLUSTER GAS & OIL PIPELINE (2005-2010)

UMM BAB – MESAIEED CRUDE OIL PIPELINE (2006-2009)

SAS/ASAB MAIN OIL LINE (2009-2013)

OCP SLURRY PIPELINE (2010-2015)

TRANS ANATOLIAN NATURAL GAS PIPELINE (TANAP) LOT-3 (2014-2017)

YANBU – JEDDAH PIPELINE (2017-2019)

BUILDING A SUSTAINABLE FUTURE

TEKFEN

CONSTRUCTION MANAGEMENT SYSTEM

PIPELINE WORKS

PIPE TRACKING SYSTEM

No Paper

On digital platform

- Web based system – accessible from anywhere from any device (tablet, mobile and computer etc.)
- Easy to integrate to other programs (like Oracle, Filenet, Unifier etc.)
- User friendly

CONSTRUCTION MANAGEMENT SYSTEM

Concrete Works

- Material Receiving
- Pre-Pour Inspection
- Concreting
- Post-pour Inspection
- Coating
- Release for O.A.

Earth Works

- Material Receiving
- Existing Ground Control
- Laying of Material
- Compaction

Electrical Works

- Material receiving
- Cable Tray
- Conduit Installation
- Cable Pulling
- Cable Inspection
- Termination
- Electrical Equipment
- Grounding
- Motor Run
- Cathodic Protection

Instrumentation Works

- Material Receiving
- Instrument Installation
- Instrument Cabling
- Loop check

Mechanical works

- Rotating Equipment
- Static Equipment
- Special Equipment
- Fire Fighting

Building Works

- Architecture
- Piping
- HVAC
- Fire Fighting
- Concrete
- Masonry
- Plumbing
- Cladding
- Equipment

Pipeline Works

- Material Receiving
- Stringing
- Cold Bending
- Welding
- NDT-AUT
- Repair Weld
- Field Joint Coating
- Holiday Test
- Lowering In
- Trenching
- Backfilling
- Hydrotest
- Reinstatement

Asphalt Works

- Material Receiving
- Mix Design Approval
- Subgrade Laying
- Subbase Laying
- Compaction Test
- Base Course
- Final Check
- Road Marking
- GuardRail Installation
- Fencing
- Signalization

Tank Erection

- Material Receiving
- Foundation Release
- Cadhodic Protection
- Annular Plate
- Bottom Plate
- Shell Plate
- Welding
- NDT
- Roundness Control
- Picking & Bending Control
- Levelness Control
- Hydrotest
- Painting
- Tank Final Check List
- Reinstatement
- Box up

Spool Fabrication and Erection

- Material Receiving
- Nasting
- Welding
- NDT
- Repair
- PWHT
- Painting
- Release for Installation
- Field Installation
- Field Joint Coating
- Hydrotest
- Reinstatement

Pre-commissioning

Steel Fabrication and Erection

- Material Receiving
- Nasting
- Welding
- NDT
- Repair
- PWHT
- Painting
- Release for Installation
- Field Erection
- Bolt Torquing

Paint Tuoch up

Quality Assurance

- Change management
- Non-Conformance
- Over,Short,Damage
- KPIs
- Risk Management
- Site Observation
- Calibration
- Internal Audits

HSSE

- KPIs
- Site Observation
- Incident reports
- Health Reports
- Waste Management
- Work Permit

PIPELINE WORKS

- Material Receiving
- Stringing
- Cold Bending
- Welding
- NDT-AUT
- Repair Weld
- Cutting Line Pipe
- Field Joint Coating
- Holiday Test
- Lowering In
- Hydrotest
- Trenching
- Backfilling
- Reinstatement

Pipe Tracking System

PIPE TRACKING SYSTEM

Tracing the material of line pipe from mill source to pipeline system

Heat Number

Pipe Number

Kilometer Point
Section No

PIPE TRACKING SYSTEM

Each line pipe has specific information

- Heat Number
- Pipe Number
- Pipe Coating
- Diameter
- Wall Thickness
- Length
- Material Details
- Pipe Manufacturer
- Test Certificates

PIPE TRACKING SYSTEM

Tracing the material of line pipe from mill source to pipeline system

- Material Receiving
- Stringing
- Cold Bending
- Welding
- NDT-AUT
- Repair Weld
- Cutting Line Pipe
- Field Joint Coating

Heat Number
Pipe Number
Pipe Coating
Diameter
Wall Thickness
Length
Material Details
Pipe Manufacturer

Other inspection and record information

Document Title:

VISUAL EXAMINATION REPORT FOR PIPELINE WELDING

Report No:		*DOC. No.*		Rev 0

TEKFEN CONSTRUCTION

Location			Drawing No.										Date								
					EXAMINATION RESULTS ***																
					WORK PIECE DATA							Fit-up	Temperature		Root Pass	Fill Passes	Cap Pass		NDT Release		
Sl. No	WPS No	PROCESS	Welder ID	Joint No	*Diameter mm*	*Heat No (1)*	*Pipe No (1)*	Pipe Thickness *(1)*	*Heat No (2)*	*Pipe No /(2)*	Pipe Thickness *(2)*	*Decision*	*Pre-heat*	*Inter-pass*	*Decision*	*Decision*	*Decision*	*Found*	AUT or RT	MT or PT	Other
1																					
2																					
3																					
4																					
5																					

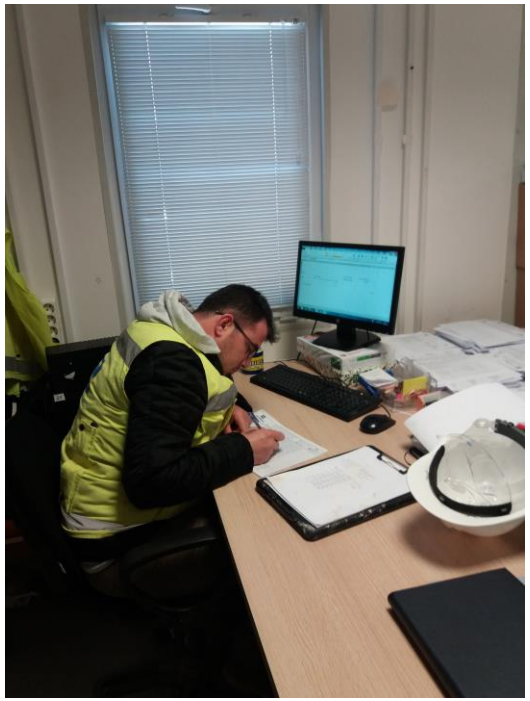
* ELECTRICAL CHARACTERISTICS AND TRAVEL SPEED						Remarks;
Joint No	Layer Joint Tested	PROCESS	AMPERAGE (A)	VOLTAGE (V)	Travel Speed (CM/MIN)	

* : Randomly measurement as follows

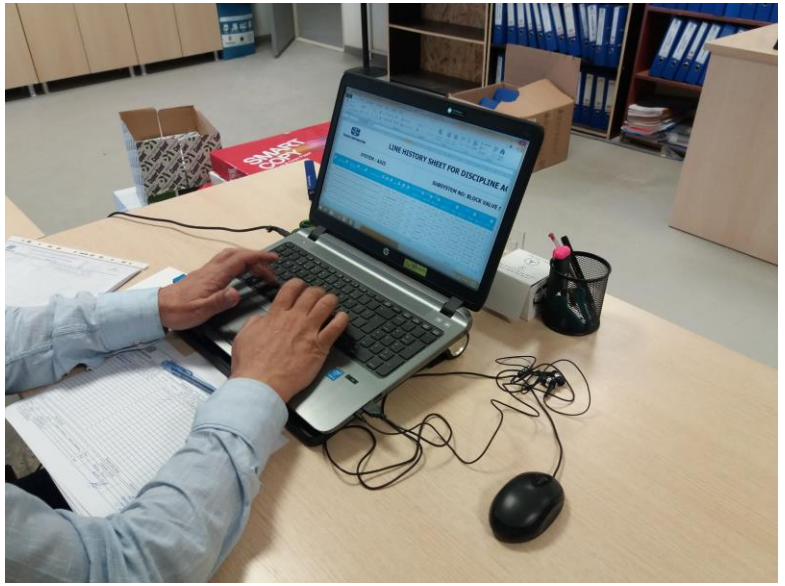
Defects AS: Arc Strike / Cr: Crack / UC: Undercut / HL: High-Low / IR: Insufficient Weld Reinforcement / ER: Excessive Weld Reinforcement

PIPE TRACKING SYSTEM

Inspector recording on scribble



Transferring from scribble to inspection form



Data enterance to database

PIPE TRACKING SYSTEM

Barcode Reading in few secs.

Filling the inspection form

12

PIPE TRACKING SYSTEM

Advantages of Digital Data Collecting

Giving confidence to the Client

No Paper Wastage

Saving time

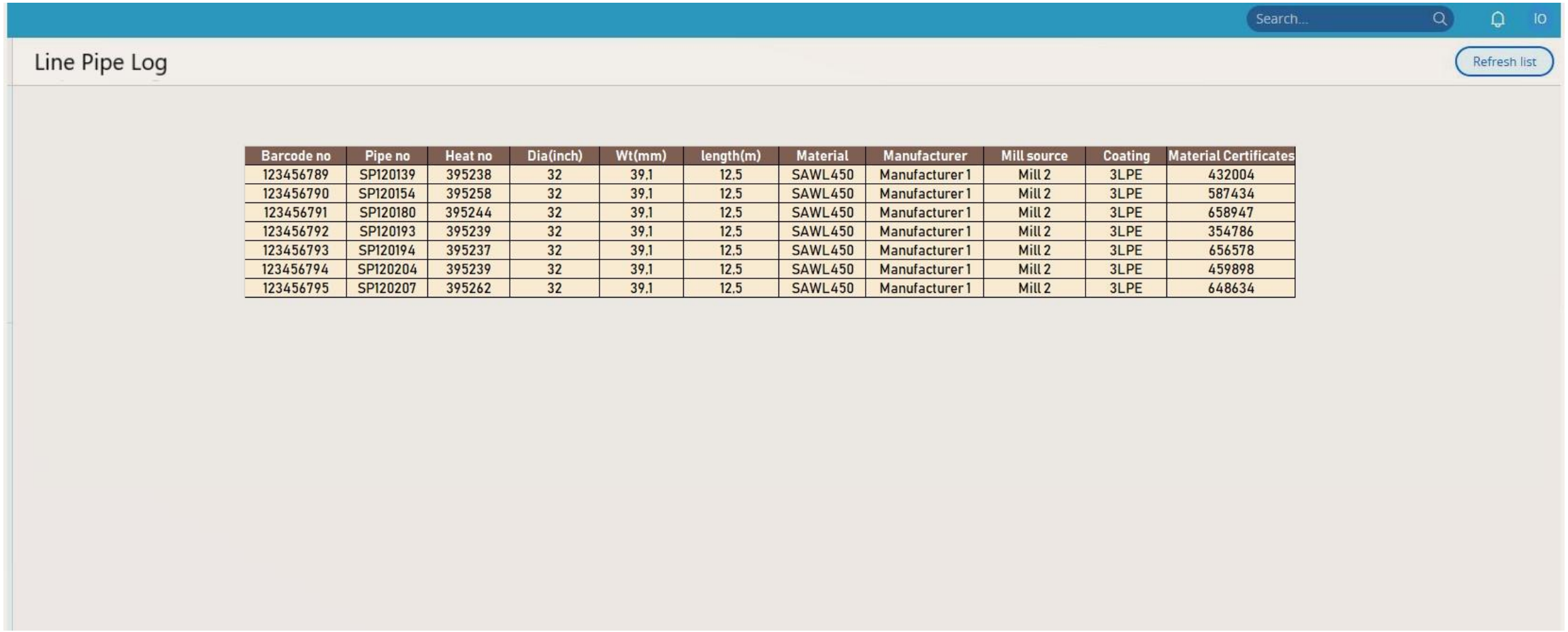
Minimizing human errors

PIPE TRACKING SYSTEM

Barcode

- Heat Number
- Pipe Number
- Pipe Coating
- Diameter
- Wall Thickness
- Length
- Material Details
- Pipe Manufacturer

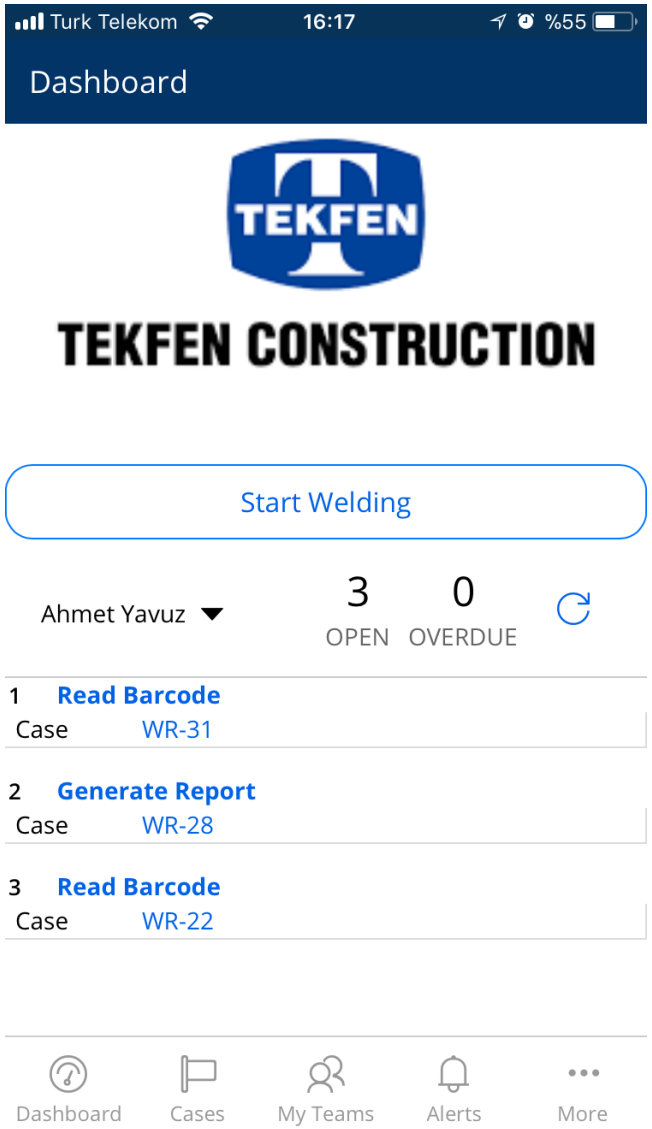
PIPE TRACKING SYSTEM



Barcode no	Pipe no	Heat no	Dia(inch)	Wt(mm)	length(m)	Material	Manufacturer	Mill source	Coating	Material Certificates
123456789	SP120139	395238	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	432004
123456790	SP120154	395258	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	587434
123456791	SP120180	395244	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	658947
123456792	SP120193	395239	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	354786
123456793	SP120194	395237	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	656578
123456794	SP120204	395239	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	459898
123456795	SP120207	395262	32	39,1	12,5	SAWL450	Manufacturer 1	Mill 2	3LPE	648634

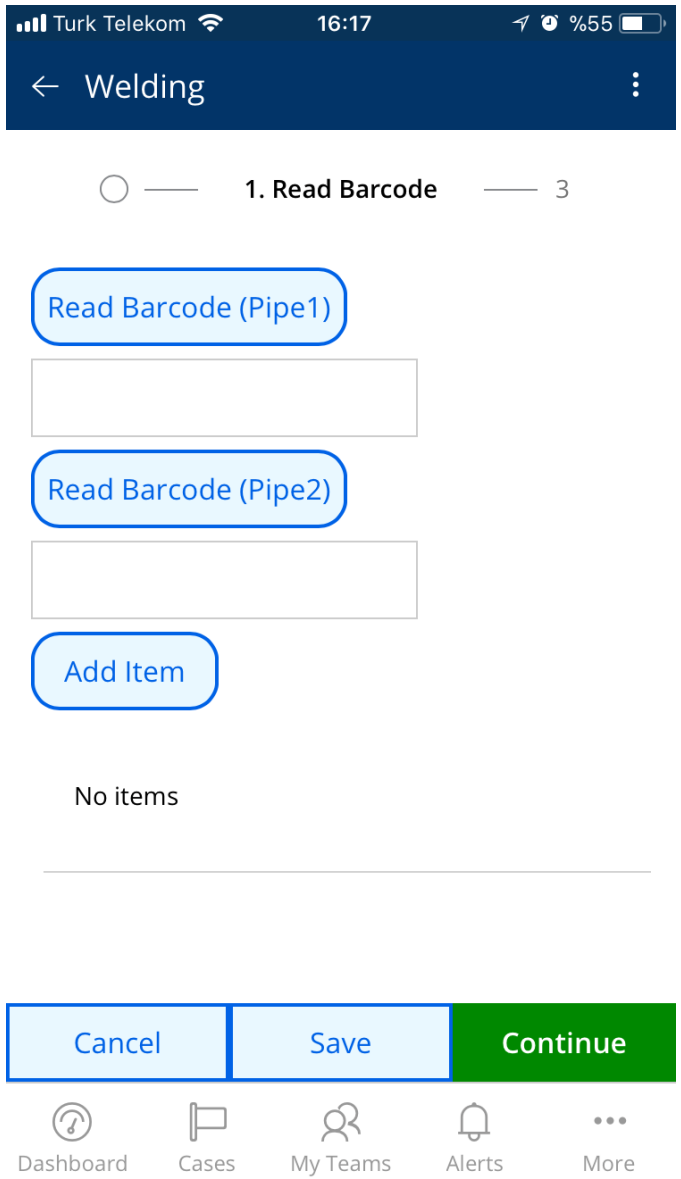
PIPE TRACKING SYSTEM

Welding Inspection



PIPE TRACKING SYSTEM

Barcode Reading

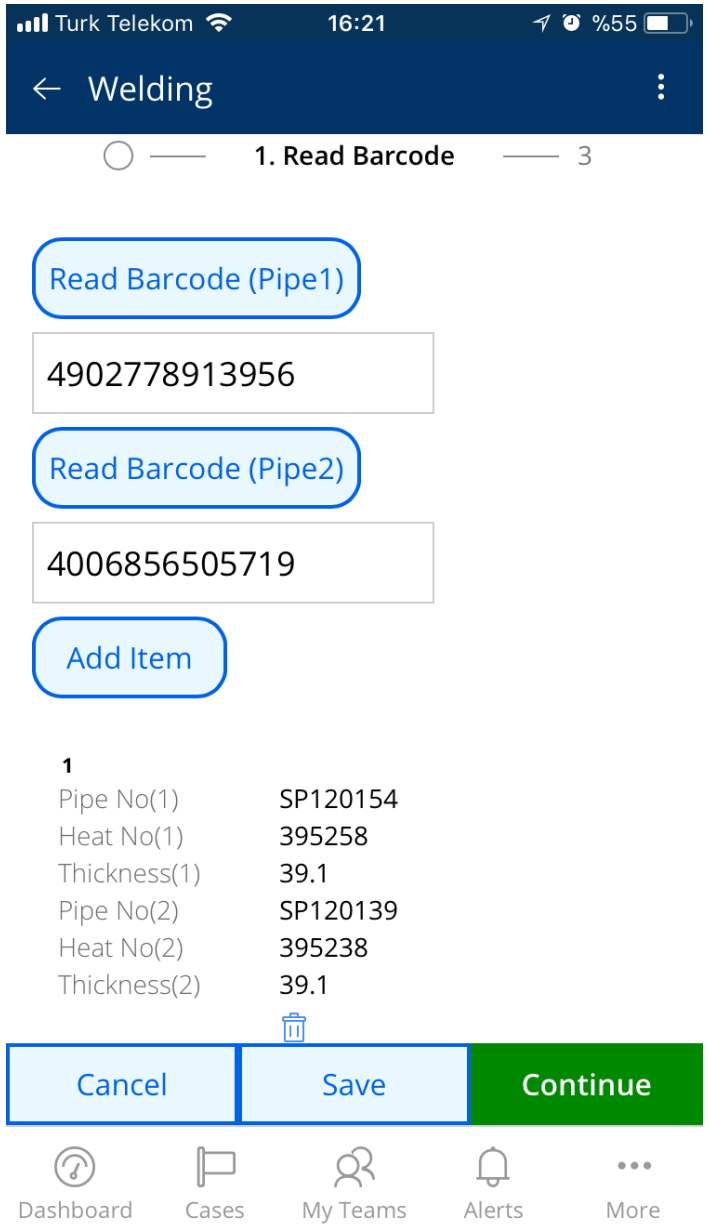


PIPE TRACKING SYSTEM

Barcode Reading

PIPE TRACKING SYSTEM

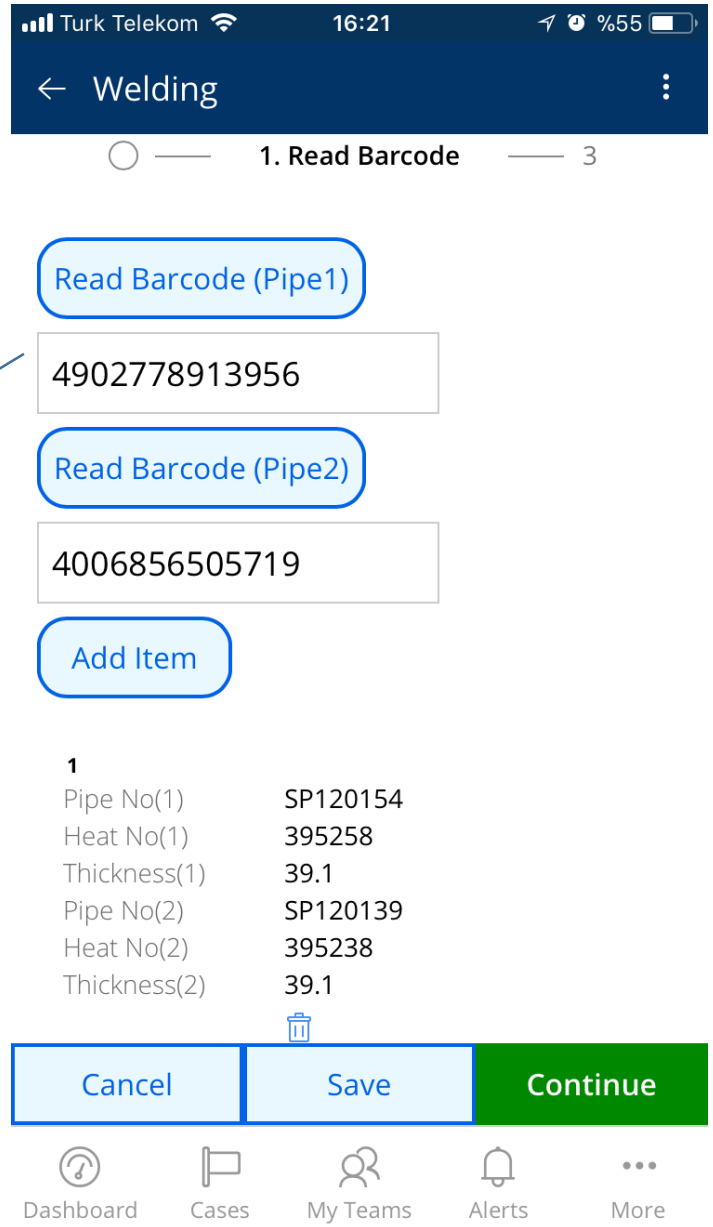
Barcode Reading



PIPE TRACKING SYSTEM

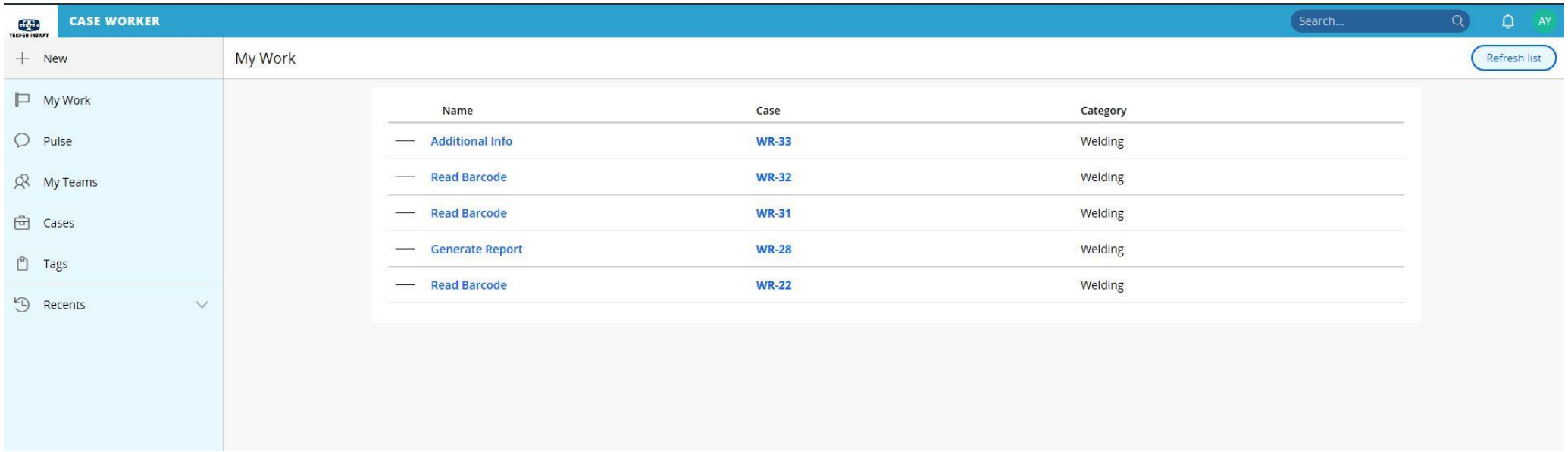
Barcode Reading

- Heat Number
- Pipe Number
- Pipe Coating
- Diameter
- Wall Thickness
- Length
- Material Details
- Pipe Manufacturer

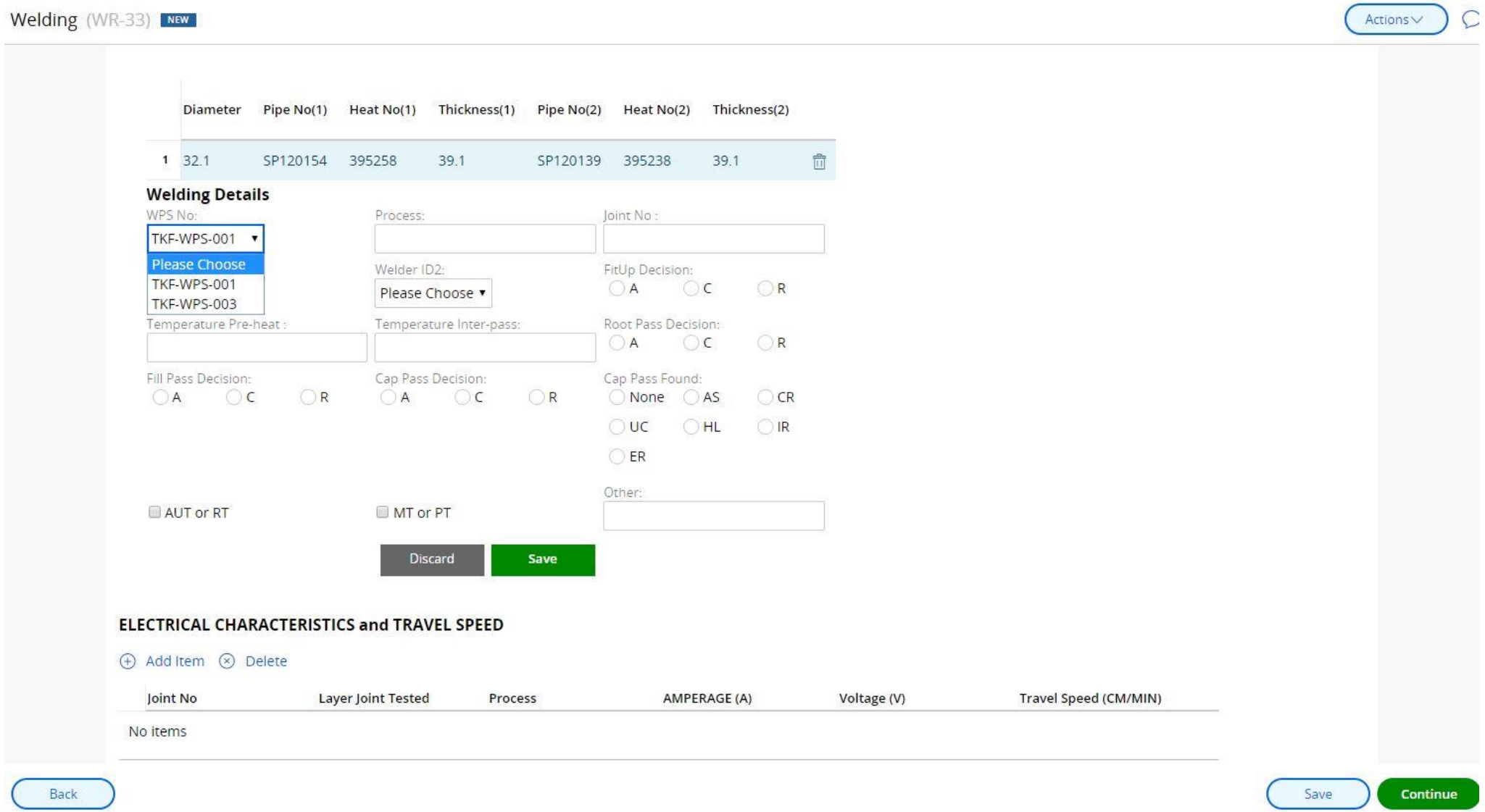


PIPE TRACKING SYSTEM

Creating Specific Report Number



PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM

Welding (WR-33) NEW

Actions

	Diameter	Pipe No(1)	Heat No(1)	Thickness(1)	Pipe No(2)	Heat No(2)	Thickness(2)
1	32.1	SP120154	395258	39.1	SP120139	395238	39.1

Welding Details

WPS No: TKF-WPS-001

Process: GTAW+FCAW

Joint No :

Welder ID1: Please Choose

- Please Choose
- W-004
- W-005
- W-008
- W-010
- W-012
- W-013
- W-016
- W-018
- W-023
- W-023
- W-033

Welder ID2: Please Choose

FitUp Decision: A C R

Temperature Inter-pass:

Root Pass Decision: A C R

Cap Pass Decision: A C R

Cap Pass Found: None AS CR UC HL IR ER

Other:

MT or PT

Discard Save

ELECTRICAL CHARACTERISTICS and TRAVEL SPEED

Add Item Delete

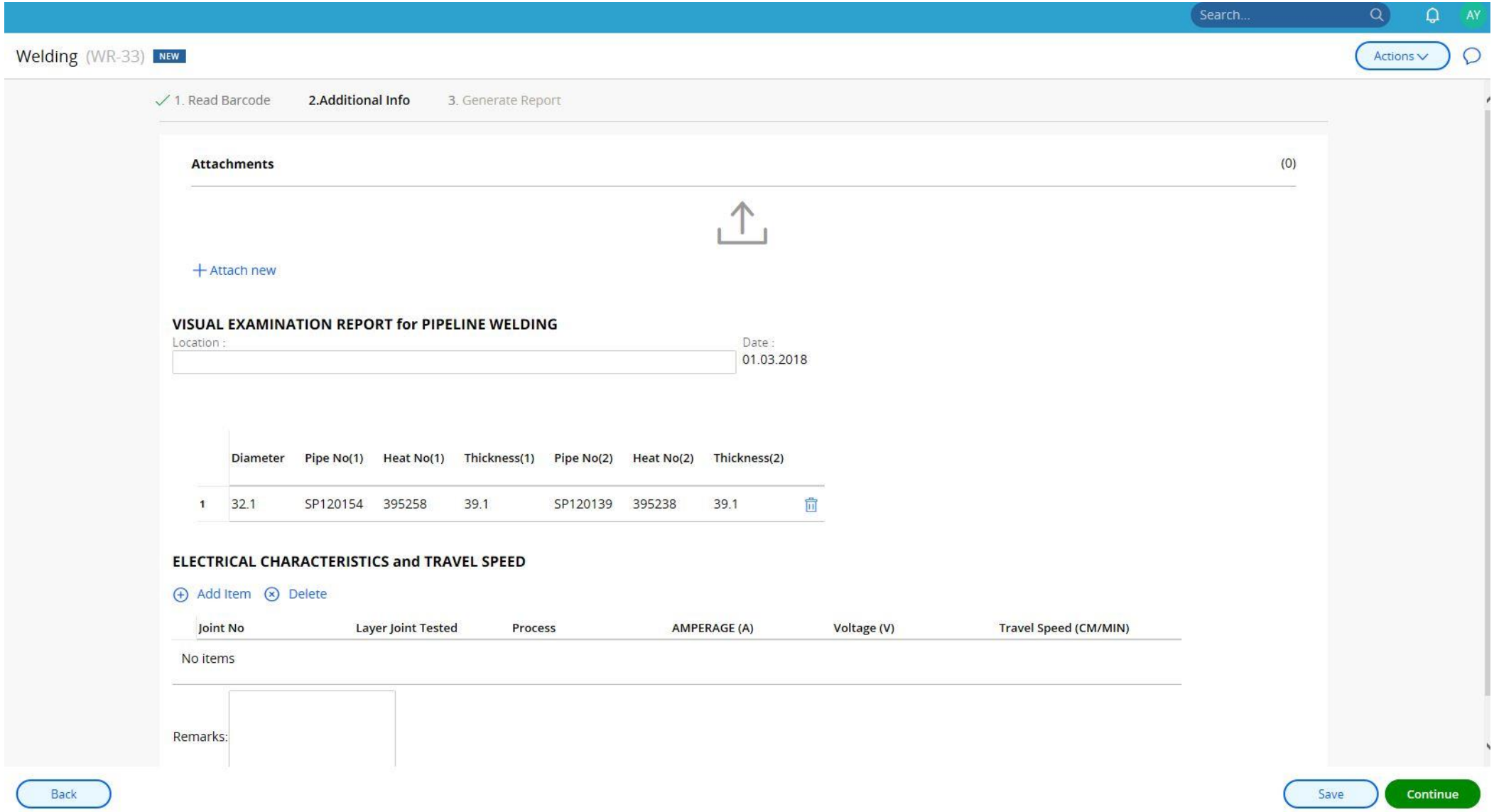
Joint No	Layer Joint Tested	Process	AMPERAGE (A)	Voltage (V)	Travel Speed (CM/MIN)
No items					

Back Save Continue

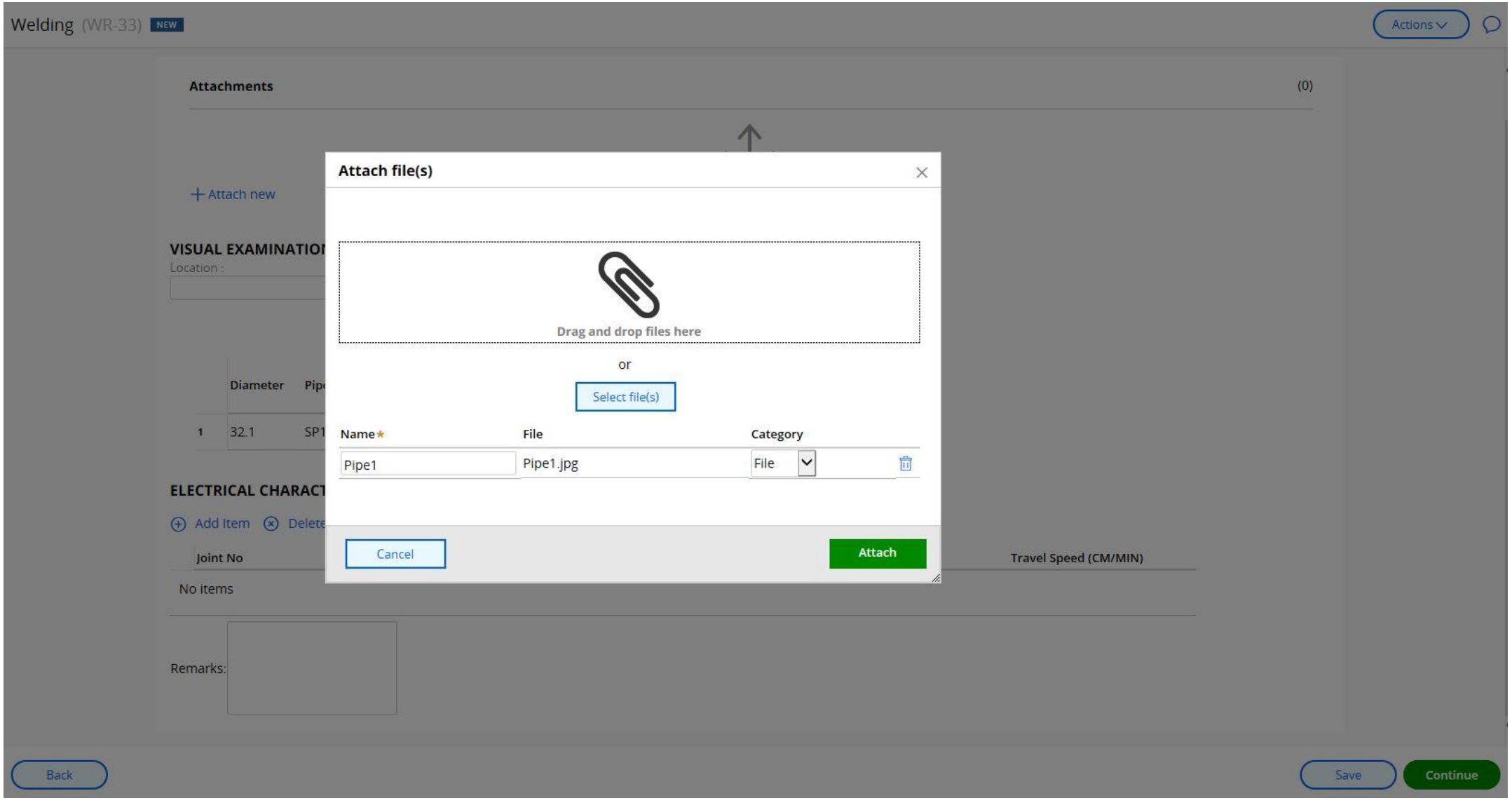
BUILDING A SUSTAINABLE FUTURE

TEKFEN

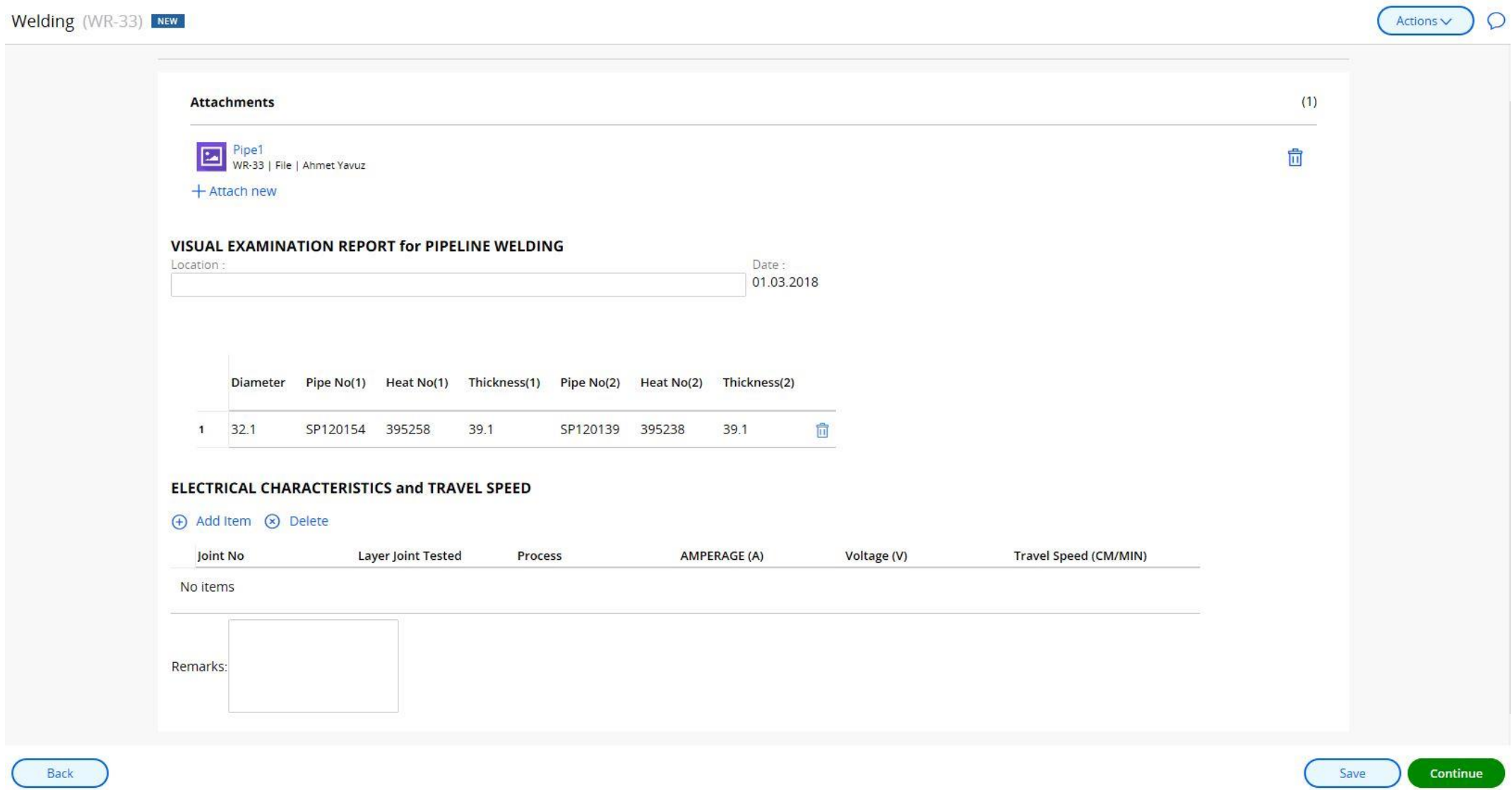
PIPE TRACKING SYSTEM



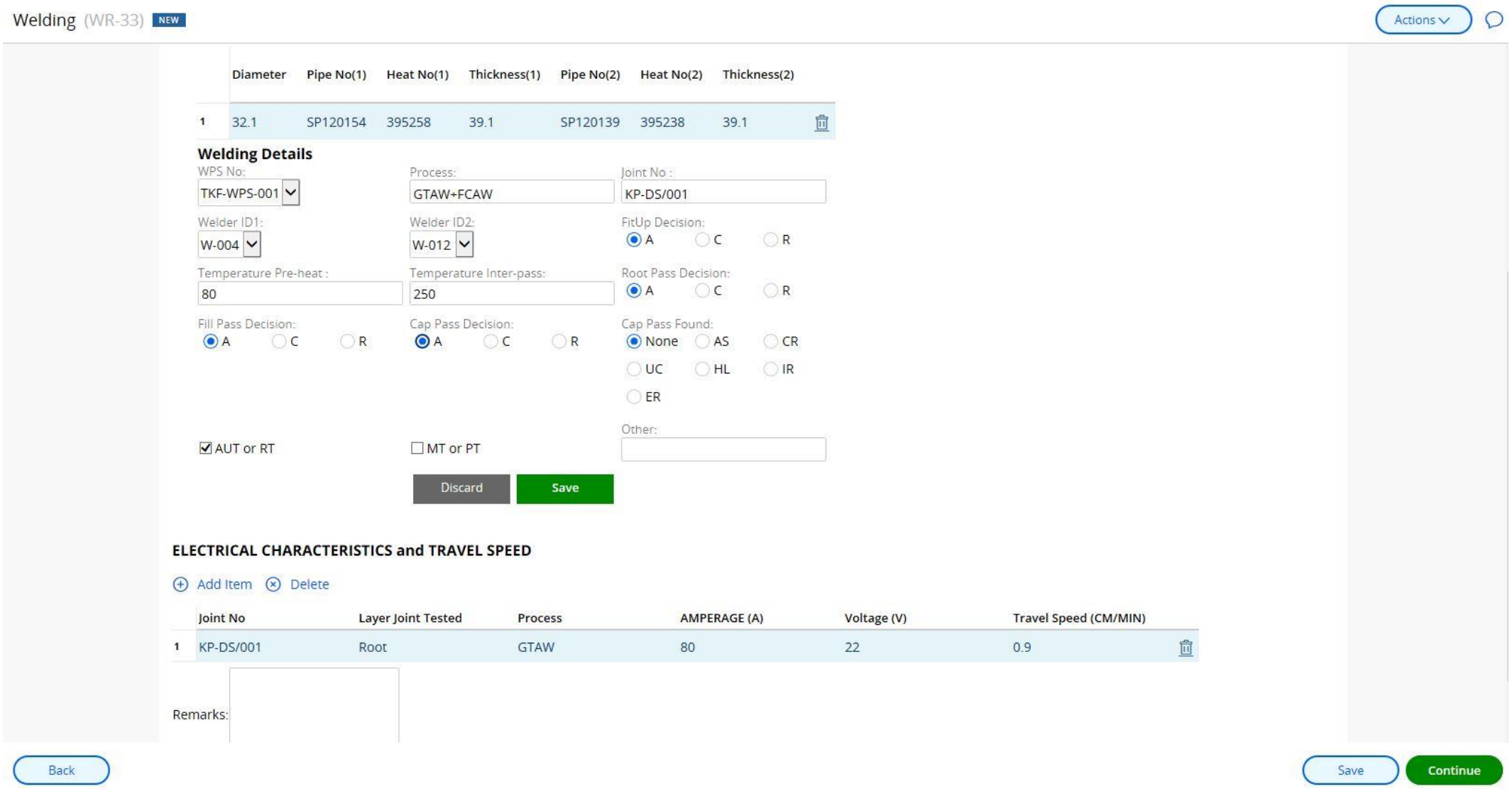
PIPE TRACKING SYSTEM



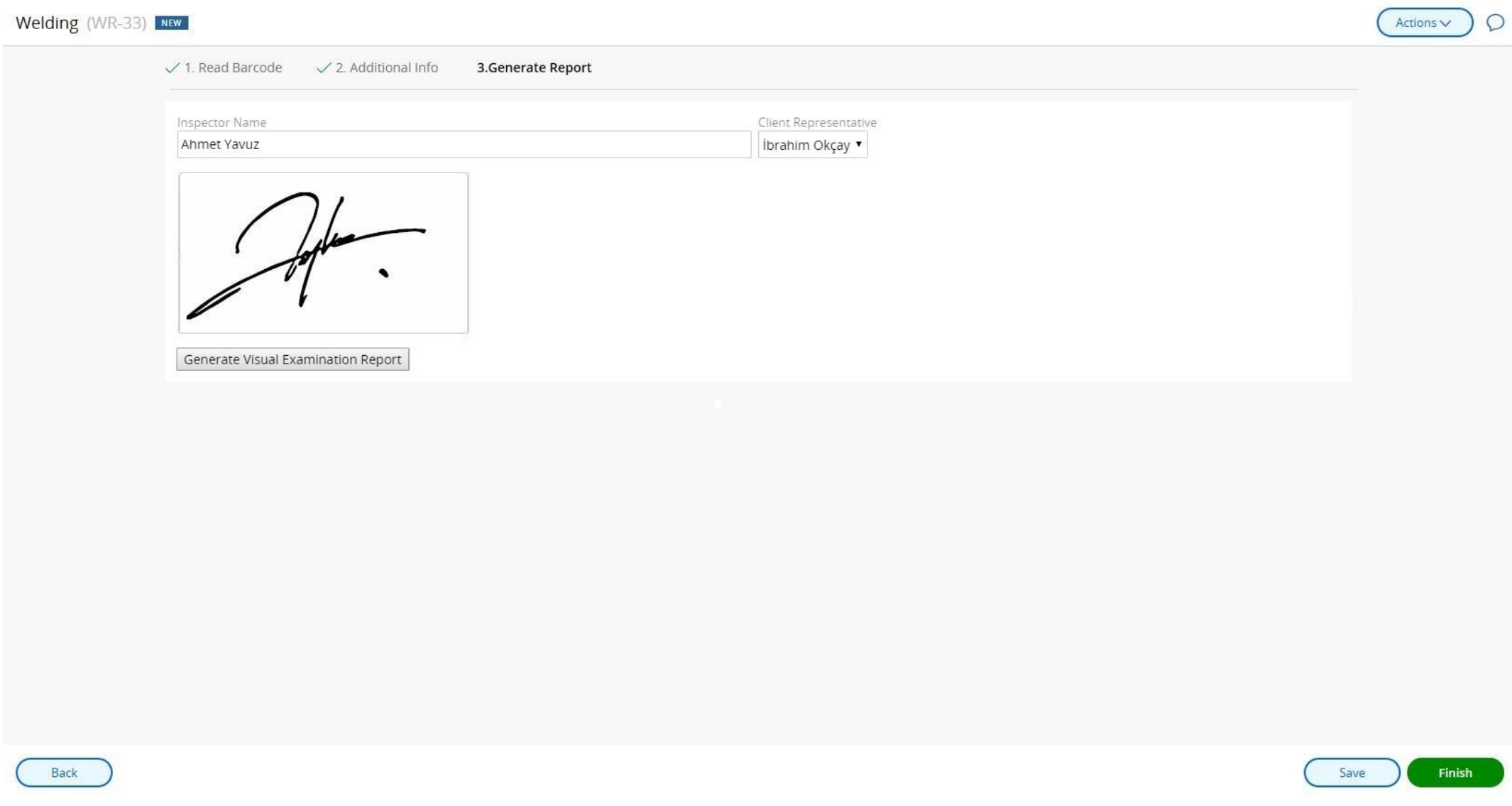
PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM

Document Title:

VISUAL EXAMINATION REPORT FOR PIPELINE WELDING

TEKFEN CONSTRUCTION

Report No:	WR-33	DOC. No.	PL-REP-008	Rev 0

Location	KP 001+000 – KP 002+000	Date	01/03/2018

EXAMINATION RESULTS ***

Sl. No	WPS No	PROCESS	Welder ID (1)	Welder ID (2)	Joint No	WORK PIECE DATA							Fit-up	Temperature		Root Pass	Fill Passes	Cap Pass		NDT Release		
						Diameter mm	Heat No (1)	Pipe No (1)	Pipe Thickness (1)	Heat No (2)	Pipe No (2)	Pipe Thickness (2)	Decision	Pre-heat	Inter-pass	Decision	Decision	Decision	Found	AUT or RT	MT or PT	Other
1	TKF-WPS-001	GTAW+FCAW	W-004	W-012	KP-DS/001	32.1	395258	SP120154	39.1	395238	SP120139	39.1	A	80	250	A	A	A	-			
2																						
3																						
4																						
5																						

Joint No	Layer Joint Tested	PROCESS	AMPERAGE (A)	VOLTAGE (V)	Travel Speed (CM/MIN)
KP-DS/001	Root	GTAW	80	22	0.9

Remarks;

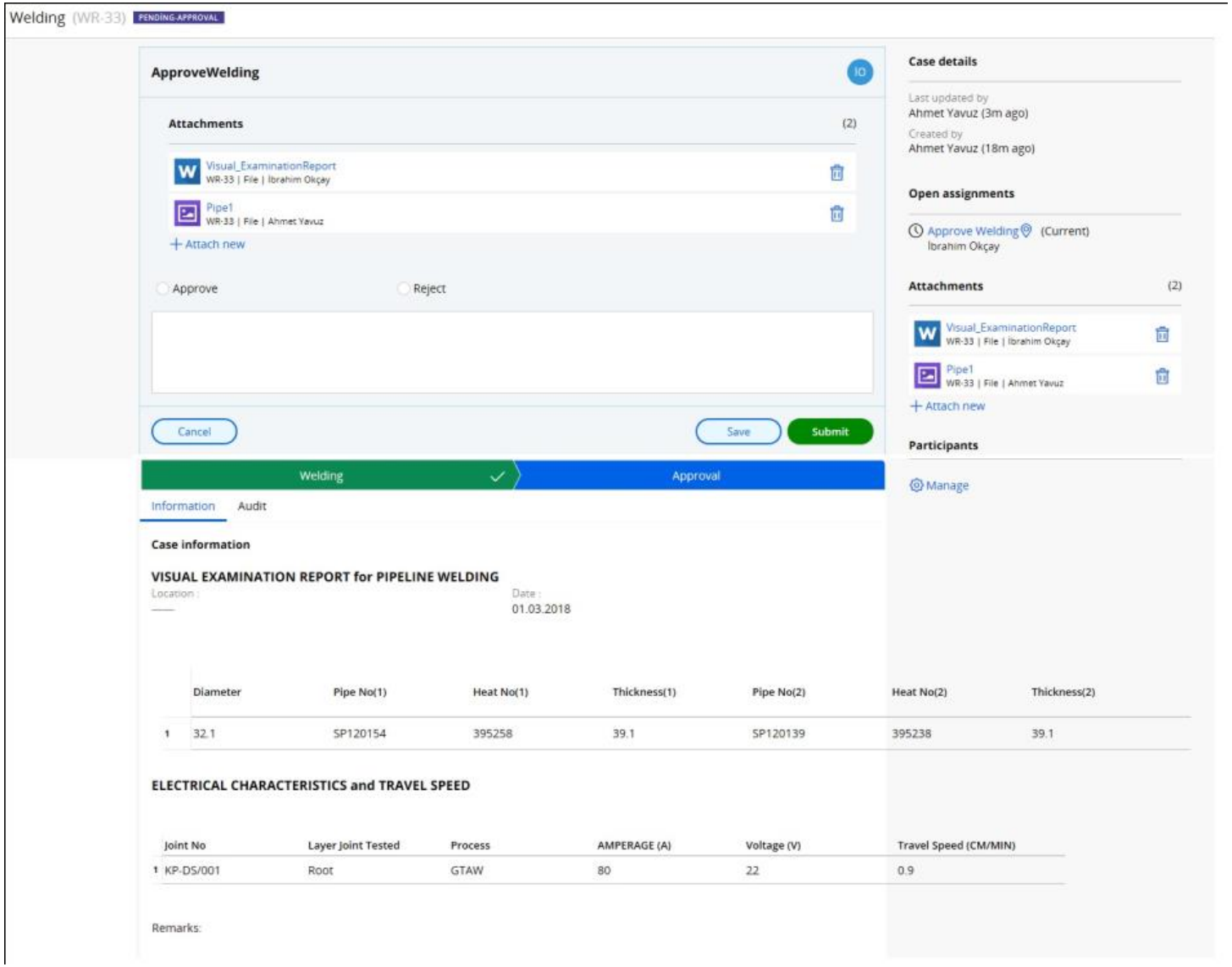
* : Randomly measurement as follows

Defects: AS: Arc Strike / Cr: Crack / UC: Undercut / HL: High-Low / IR: Insufficient Weld Reinforcement / ER: Excessive Weld Reinforcement

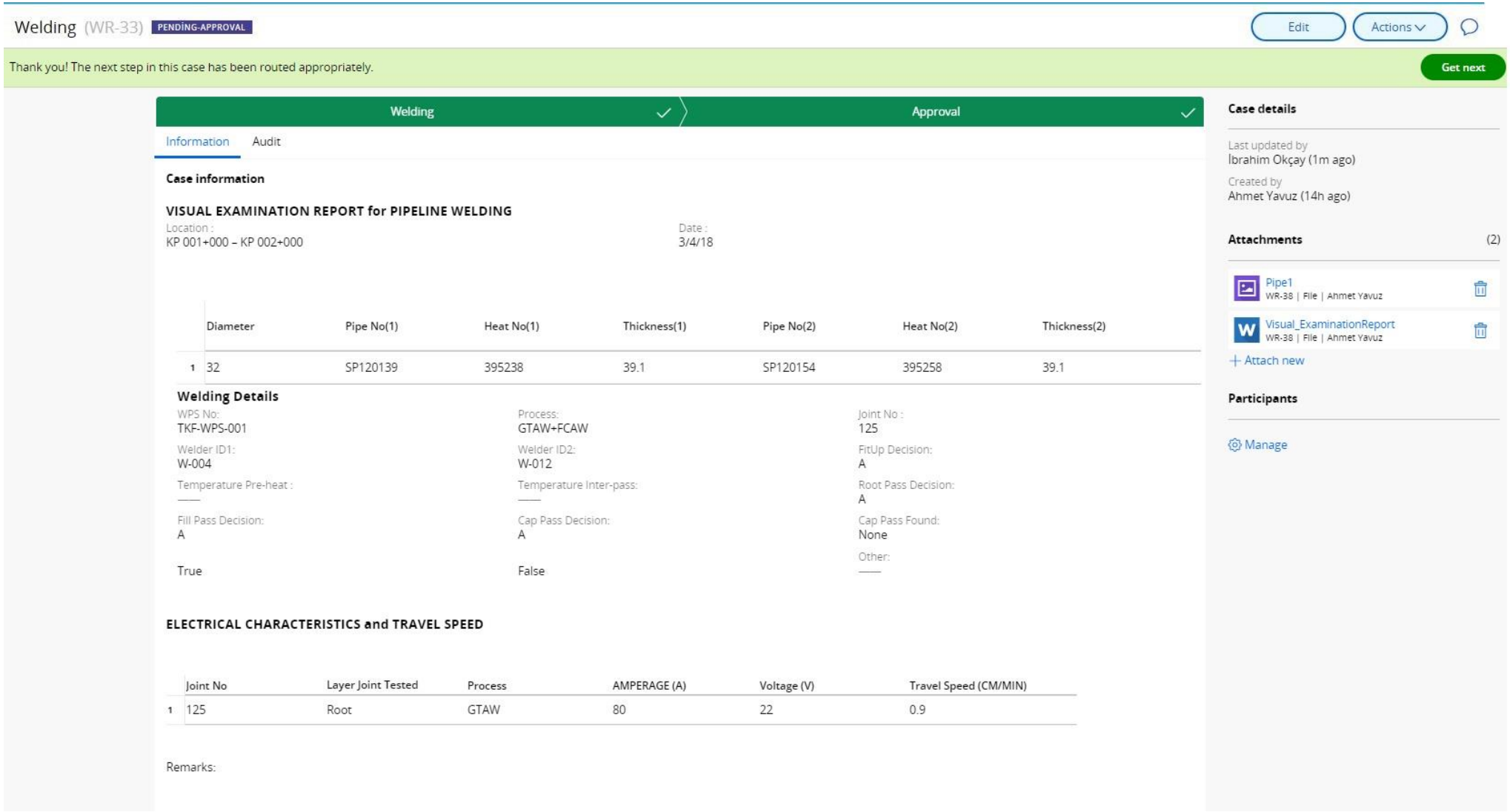
Decisions: A: Accepted / C: Cut-Out/ R: To be Repaired

	TEKFEN QA/QC (Welding Eng./Inspector)	Client Representative
Name	Ahmet Yavuz	İbrahim OKÇAY
Date	01/03/2018	

PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM



Welding (WR-33) PENDING-APPROVAL

Edit | Actions

Thank you! The next step in this case has been routed appropriately.

Get next

Welding ✓ | Approval ✓

Information | Audit

Case information

VISUAL EXAMINATION REPORT for PIPELINE WELDING

Location :
KP 001+000 – KP 002+000

Date :
3/4/18

	Diameter	Pipe No(1)	Heat No(1)	Thickness(1)	Pipe No(2)	Heat No(2)	Thickness(2)
1	32	SP120139	395238	39.1	SP120154	395258	39.1

Welding Details

WPS No:
TKF-WPS-001

Process:
GTAW+FCAW

Joint No :
125

Welder ID1:
W-004

Welder ID2:
W-012

FitUp Decision:
A

Temperature Pre-heat :
——

Temperature Inter-pass:
——

Root Pass Decision:
A

Fill Pass Decision:
A

Cap Pass Decision:
A

Cap Pass Found:
None

True

False

Other:
——

ELECTRICAL CHARACTERISTICS and TRAVEL SPEED

	Joint No	Layer Joint Tested	Process	AMPERAGE (A)	Voltage (V)	Travel Speed (CM/MIN)
1	125	Root	GTAW	80	22	0.9

Remarks:

Case details

Last updated by
İbrahim Okçay (1m ago)

Created by
Ahmet Yavuz (14h ago)

Attachments (2)

Pipe1
WR-38 | File | Ahmet Yavuz

Visual_ExaminationReport
WR-38 | File | Ahmet Yavuz

+ Attach new

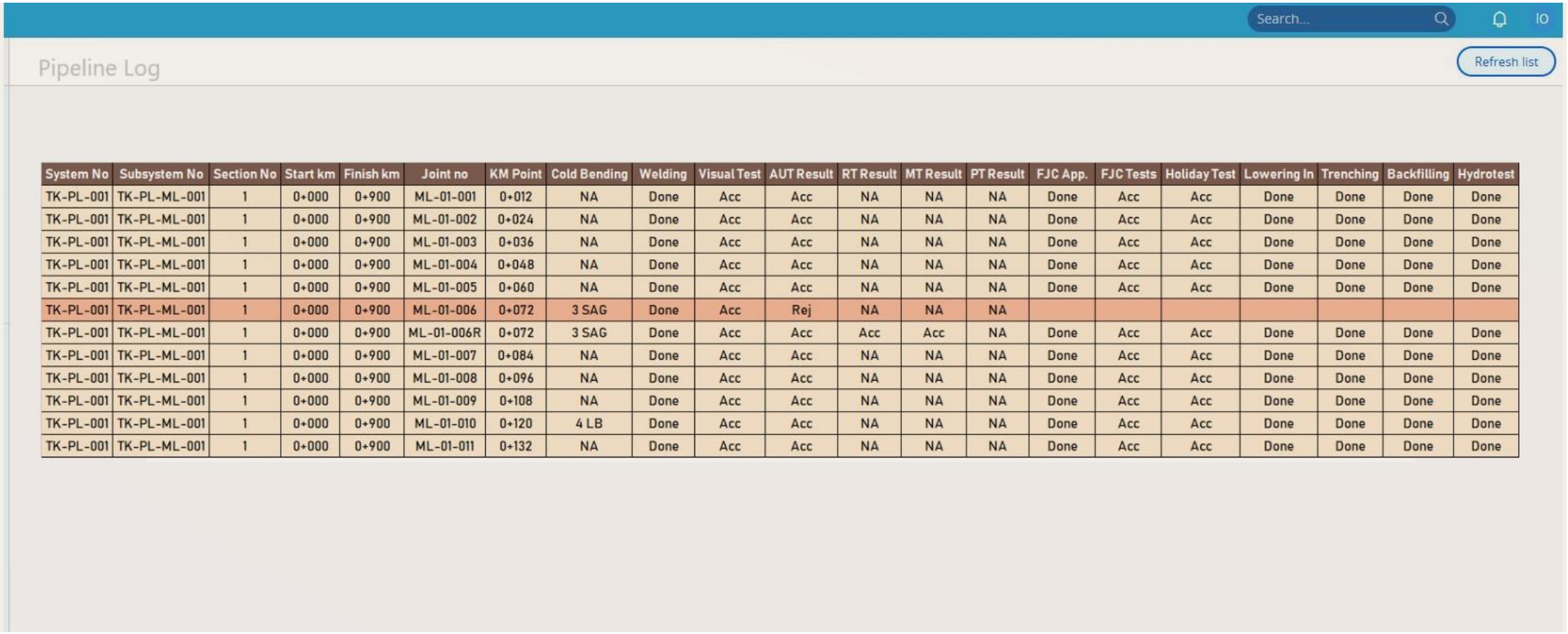
Participants

Manage

BUILDING A SUSTAINABLE FUTURE

TEKFEN

PIPE TRACKING SYSTEM



System No	Subsystem No	Section No	Start km	Finish km	Joint no	KM Point	Cold Bending	Welding	Visual Test	AUT Result	RT Result	MT Result	PT Result	FJC App.	FJC Tests	Holiday Test	Lowering In	Trenching	Backfilling	Hydrotest
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-001	0+012	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-002	0+024	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-003	0+036	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-004	0+048	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-005	0+060	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-006	0+072	3 SAG	Done	Acc	Rej	NA	NA	NA							
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-006R	0+072	3 SAG	Done	Acc	Acc	Acc	Acc	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-007	0+084	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-008	0+096	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-009	0+108	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-010	0+120	4 LB	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done
TK-PL-001	TK-PL-ML-001	1	0+000	0+900	ML-01-011	0+132	NA	Done	Acc	Acc	NA	NA	NA	Done	Acc	Acc	Done	Done	Done	Done

ANY QUESTION

TEKFEN CONSTRUCTION

www.tekfenconstruction.com
www.tekfeninsaat.com.tr

Tekfen Construction

Tekfen Construction

Thank You for Listening

By: Ibrahim Okcay