



# SIBERIA RUSSIA PIPE PRODUCTION LINE

## 1. PROJECT DATA

- a. Pipe diameter: 1,420 mm ~ 56"
- b. Pipe thickness: 20 mm (0.787")
- c. Shell length: 3,000 mm (118.1")
- d. Shell weight: 2.10 tons
- e. Max pipe length: 42 m (14 shells @ 3.0 m each)
- f. Pipe weight: 29.40 tons
- g. Pipe material: N/A (Non available)
- h. "X" Ray: Sub-contract
- i. Coating: Not required
- j. Hydrostatic test: Not required

## 2. PERFORMANCE DATA:

- a. Performance per day = 100 metric ton/two 8 hours shifts
- b. # Pipes per shift: 1.70 pipes (50 tons/29.40 tons per pipe)
- c. # Shells per shift: 24 shells (1.70 pipes x 14 shells)
- d. Production lines: three
- e. # Shells per production line: 8 shells per 8 hours shift

## 3. PRODUCTION LINE ADVANTAGE

- ✓ Production move on conveyor from the beginning to the end
- ✓ Conveyor line make the process clean and ordering fashion
- ✓ Minimum over-head crane required
- ✓ Save thousands of dollars on crane investment
- ✓ Save hundreds of production hours waiting for crane availability
- ✓ Production line: balance
- ✓ Production move smooth and always straight line



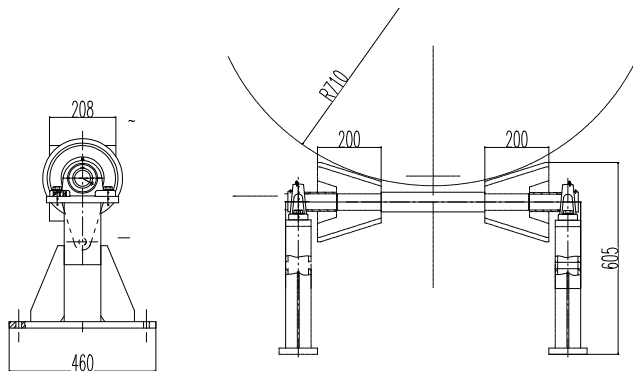
- ✓ Save thousands of dollars on shop space
- ✓ Few labor required
- ✓ Personal is more efficient working on specific areas
- ✓ Personal do not move. Production line moves instead
- ✓ Save thousands of dollars on repairs and re-process

#### 4. LONGITUDINAL SEAM WELDING STATION SAW – TANDEM INSIDE & OUTSIDE

##### COMPONENTS

##### 1. Shell Conveyor

- a. Length: 60 m
- b. Type: Non- motorized
- c. PFRI, Idler Roller
- d. Load capacity: 2 tons
- e. Roller cone type: OD 200 mm \* W 200 mm



##### 2. Conventional Welding Rotator Model WR 5

- a. Power Rotator max rotation capacity: 5 metric tons
- b. Power Rotator max load capacity: 2.5 metric ton
- c. Idler Rotator max load capacity: 2.5 metric tons
- d. Remote control box and foot control pedal: Included
- e. Vessel diameter range: 1000 up to 1,600 mm
- f. Variable speed: 100 up to 1,000 mm/minute

**3. Flux Bed**

- a. Approx. dimensions: 3.50 m (L) x 0.15 m (W) x 0.15 m (H)
- b. Hose for air pressure: included
- c. Lifting capacity: included

**4. Self- Stand Welding Manipulator Model WM 2045 for SAW-TANDEM**

- a. Boom vertical expansion: 2.0 m
- b. Boom horizontal expansion: 4.5 m
- c. Boom expansion speed: 0.12 up to 1.2 m/minute
- d. Boom lifting speed: 1.0 m/min
- e. Column rotation:  $\pm 180^\circ$  motorized
- f. Max load at boom extremity: 300 kilograms
- g. Trolley speed: not apply
- h. Loading and un-loading shell device
- i. Lincoln Tandem (DC 1500/AC1200), welding heads, welding controls & cables
- j. Lincoln DC 600 with arc-air (carbon gouging) & manual stick weld
- k. Flux recovery system Model FRU-100 with heater
- l. Seam Tracker Model KB-20 for Tandem. 100 kilograms loading capacity, "X" & "Y" tracking range of 200 mm each,  $\pm 0.25$  mm accuracy.
- m. Welding View: camera, screen 9", cable and power unit

Note: Required SAW wire barrels of 500 kilograms each, required

**PROCESS**

- a. Shell is call a round piece made of steel plate cut, rolled (curved) and tack weld
- b. Shell specs: 1,420 mm diameter, 3,000 mm length, 20 mm thickness @ 2.10 metric tons each
- c. Tack weld shells are placed on idler conveyor
- d. Loading and un-loading shell device is used to move shells from conveyor line to the longitudinal seam welding station and vice versa
- e. Shell sits on conventional welding rotators Model WR 5
- f. Longitudinal seam is positioned on the bottom by means of welding rotators
- g. Flux bed is lifted and tight to the bottom shell



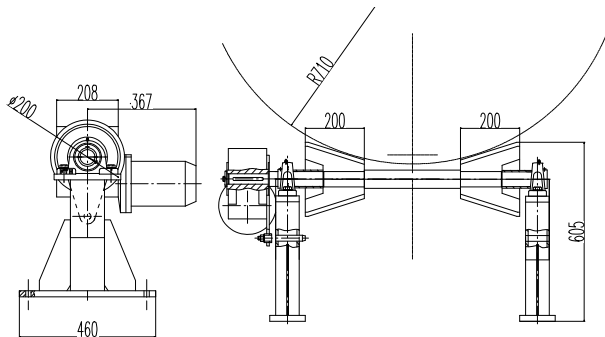
- h. INSIDE longitudinal seam is made by means of a Welding Manipulator Model WM 2045 (C&B)
- i. After inside welding is made. The shell turns 180 degrees (to the top)
- j. OUTSIDE longitudinal seam is made with C&B
- k. Shells returns to conveyor line

5. **FIT UP (ASSEMBLING)**  
**& INSIDE CIRCUNFERENTIAL SEAM**  
**& AND OUTSIDE CIRCUNFERENTIAL SEAM**

**COMPONENTS**

1. **Shell Conveyor**

- a. Length: 60 m
- b. Type: motorized
- c. PFRDI, Power Roller
- d. Load capacity: 2 tons
- e. Turing capacity: 3 tons
- f. Roller cone type: OD 200 mm \* W 200 mm



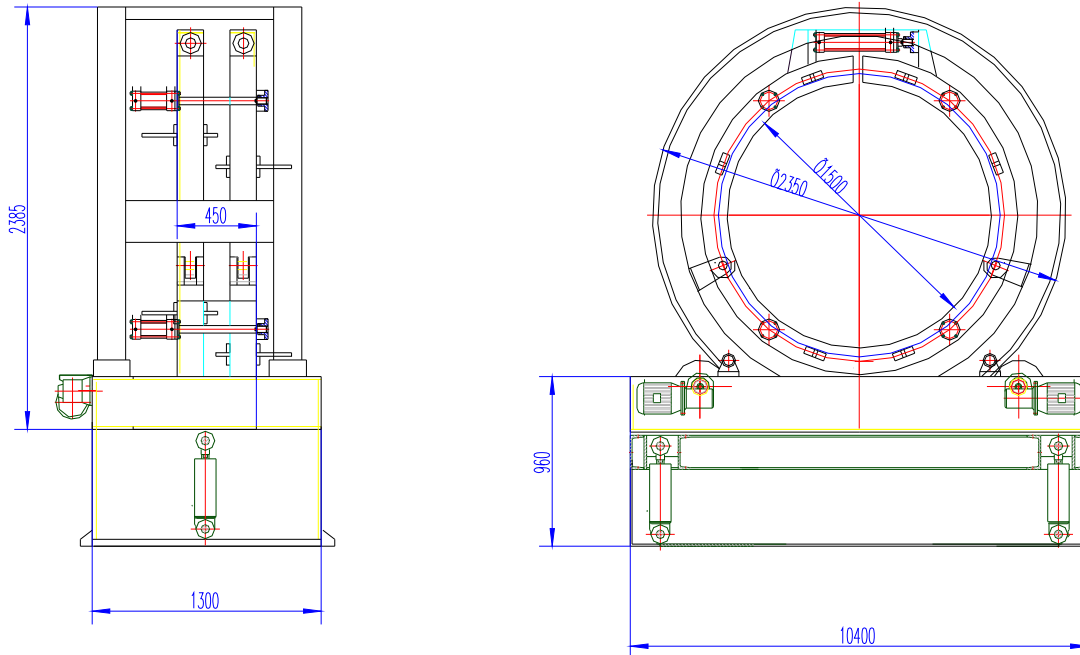
**2. Welding Manipulator Model WM 2045 with motorized trolley**

For INSIDE Circumferential seams with SAW-TANDEM

- a. Boom vertical expansion: 2.0 m
- b. Boom horizontal expansion: 4.5 m
- c. Boom expansion speed: 0.12 up to 1.2 m/minute
- d. Boom lifting speed: 1.0 m/min
- e. Column rotation:  $\pm 180^\circ$  motorized
- f. Max load at boom extremity: 300 kilograms
- g. Trolley speed: 5.0 m/min
- h. Trolley type: expanded
- i. Lincoln Tandem (DC 1500/AC1200), welding heads, welding controls & cables
- j. Lincoln DC 600 with arc-air (carbon gouging) & manual stick weld
- k. Flux recovery system Model FRU-100 with heater
- n. Seam Tracker Model KB-20 for Tandem. 100 kilograms loading capacity, “X” & “Y” tracking range of 200 mm each,  $\pm 0.25$  mm accuracy.
- o. Welding View: camera, screen 9”, cable and power unit

**3. Clamping Ring Model ECR 1420**

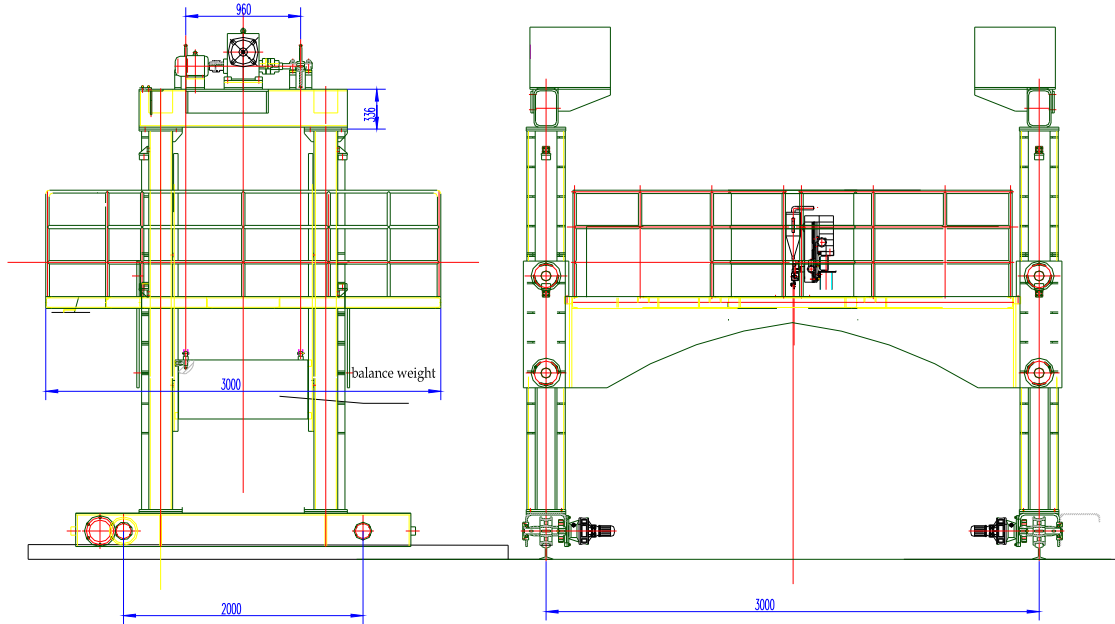
- a. Outside diameter: 1,420 mm
- b. Clamping ring with cooper
- c. Hydraulic power: 5.5Kw
- d. Main cylinder stroke: 100 mm
- e. Side lifting cylinder stroke: 80 mm
- f. Rotation function: WR 60, Power Rotator
- g. Estimated weight: 15 to 17 tons
- h. Pit: required



#### 4. Mobil Gantry Model GPWM-II

For OUTSIDE Circumferential seam with SAW-TANDEM

- a. Platform move up -down to accommodate pipes from 40" up to 60"
- b. Trolley translation speed (constant): 10 m/minute
- c. Variable speed on boom: 150 up to 1,500 mm/min. Variable speed will be used to repairs on longitudinal seams
- d. Lincoln Tandem (DC 1500/AC1200), welding heads, welding controls & cables
- e. Lincoln DC 600 with arc-air (carbon gouging) & manual stick weld
- f. Flux recovery system Model FRU-100 with heater
- g. Seam Tracker Model KB-20 for Tandem. 100 kilograms loading capacity, "X" & "Y" tracking range of 200 mm each,  $\pm 0.25$  mm accuracy.
- h. Welding View: camera, screen 9", cable and power unit
- i. Platform is able to carriage two wire barrels of 500 kilograms each

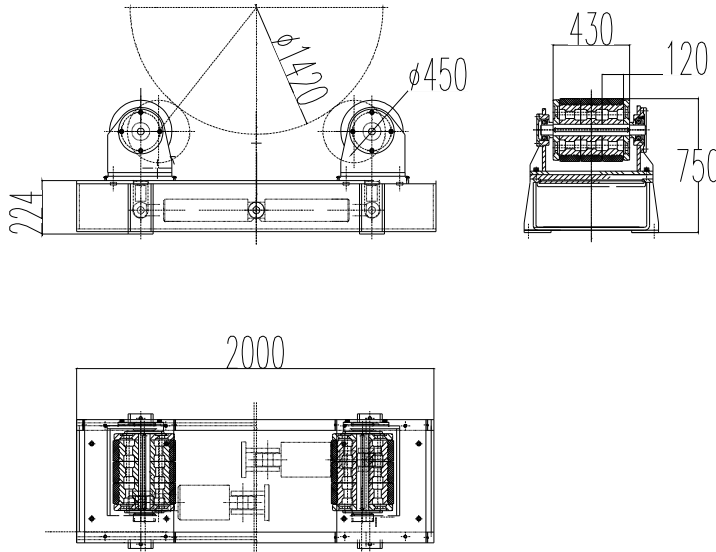


#### 5. CWR60P: Power Rotator with Hydraulic Lifting Device

- Load capacity: 30 tons
- Rotation capacity: 60 tons
- Variable speed: 150 up to 1,500 mm/minute
- Roller cone type: OD 450 mm \* W 430 mm
- Hydraulic lift: 50 mm
- Apply in shell: OD 1,420 mm

#### 6. CWR60I: Idler Rotator with Hydraulic Lifting Device

- Load capacity: 30 tons
- Rotation capacity: NA
- Roller cone type: OD 450 mm \* W 430 mm
- Hydraulic lift: 50 mm
- Apply in shell: OD 1,420 mm



## **PROCESS**

- a. Two shells are positioner on Clamping Ring Model ECR1420. First tack weld both shells and then INSIDE circumferential seam is made by means of Welding Manipulator Model 2045 with SAW-TANDEM. Back up cooper available on clamping ring
- b. Third shell is assembled and then INSIDE circumferential seam is made. At the same time, while pipe is rotating is made the OUTSIDE circumferential seam of previous shell assembled by means of GPWM-II.
- c. Fourth and followings shells are assembled and weld as per process above
- d. After the last shell is assembled the pipe is moved by drive rollers model PFRD to next station





**6. OUTSIDE CIRCUNFERENTIAL SEAM (LAST ONE)  
REPAIRS & “X” RAYS**

**COMPONENTS**

**1. Shell Conveyor**

- a. Length: 60 m
- b. Type: motorized
- c. PFRDI, Power Roller
- d. Load capacity: 2 tons
- e. Turing capacity: 3 tons
- f. Roller cone type: OD 200 mm \* W 200 mm

**2. CWR60P: Power Rotator with Hydraulic Lifting Device**

- a. Load capacity: 30 tons
- b. Rotation capacity: 60 tons
- c. Variable speed: 150 up to 1,500 mm/minute
- d. Roller cone type: OD 450 mm \* W 430 mm
- e. Hydraulic lift: 50 mm
- f. Apply in shell: OD 1,420 mm

**3. CWR60I: Idler Rotator with Hydraulic Lifting Device**

- a. Load capacity: 30 tons
- b. Rotation capacity: NA
- c. Roller cone type: OD 450 mm \* W 430 mm
- d. Hydraulic lift: 50 mm
- e. Apply in shell: OD 1,420 mm

**4. Mobil Gantry Model GPWM-II**

For OUTSIDE circumferential seam (the last one)

OUTSIDE longitudinal repairs (if any)

With SAW-TANDEM

- a. Platform move up -down to accommodate pipes from 40” up to 60”
- b. Trolley translation speed (constant): 10 m/m
- c. Variable speed on boom: 150 up to 1,500 mm/minute (for SAW longitudinal repairs)
- d. Lincoln Tandem (DC 1500/AC1200), welding heads, welding controls & cables
- e. Lincoln DC 600 with arc-air (carbon gouging) & manual stick weld
- f. Flux recovery system Model FRU-100 with heater
- g. Seam Tracker Model KB-20 for Tandem. 100 kilograms loading capacity, “X” & “Y” tracking range of 200 mm each,  $\pm 0.25$  mm accuracy.
- h. Welding View: camera, screen 9”, cable and power unit
- i. Platform is able to carriage two wire barrels of 500 kilograms each

**5. Welding Rotator Model WR 60 (one power + one idler)**

- a. Power Rotator max rotation capacity: 60 metric tons
- b. Power Rotator max load capacity: 30 metric ton
- c. Idler Rotator max load capacity: 30 metric tons
- d. Remote control box and foot control pedal: Included
- e. Vessel diameter range: 1000 up to 1,600 mm
- f. Variable speed: 100 up to 1,000 mm/minute



## **PROCESS**

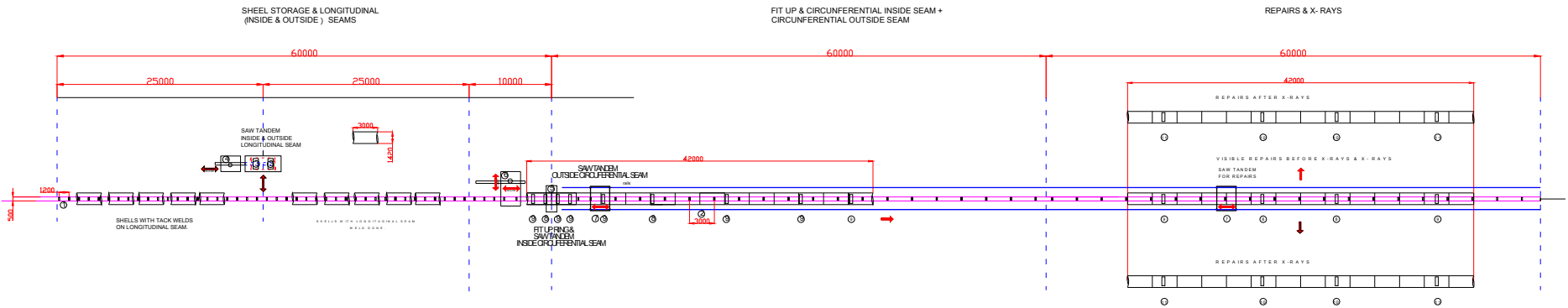
- a. Last Circumferential Seam is made by SAW-TANDEM by means of Mobil Gantry Model GPWM-II
- b. Small visible defects are repairs with stick weld. Large visible defects are repair with SAW-TANDEM by means of Mobil Granby, both longitudinal and circumferential welds.
- c. "X" Ray is made after all visible defects are repaired
- d. Pipe moves away from main fabrication line (conveyor) by means of overhead crane. Pipe is positioned on welding rotator model WR 60 (two power synchronized and two idlers)
- e. Welding defects are marked after "X" ray results are available
- f. Repairs are made by manual stick weld by means of Lincoln DC 600

## **EXCLUSIONS:**

Not included in our offer and if required shall be end buyer scope of supply/work

- a. Power supply and all cables (including power feed, cable laying, dressing, earth, etc) up to our control panel
- b. Any items which is not specifically mentioned
- c. Any other finish than specified
- d. All civil engineering and foundation work including cable trenches, pit coverings and grouting of equipment.
- e. For erection and commissioning the end buyer must have material handling and other minor workshop facility that may be required such as welding equipment, gas cutting equipment, hand drilling, etc.
- f. Permission required from any local authorities

## **7. SKETCHES**



**PIPE LINE**

**IRIZAR HEAVY INDUSTRIES INC**

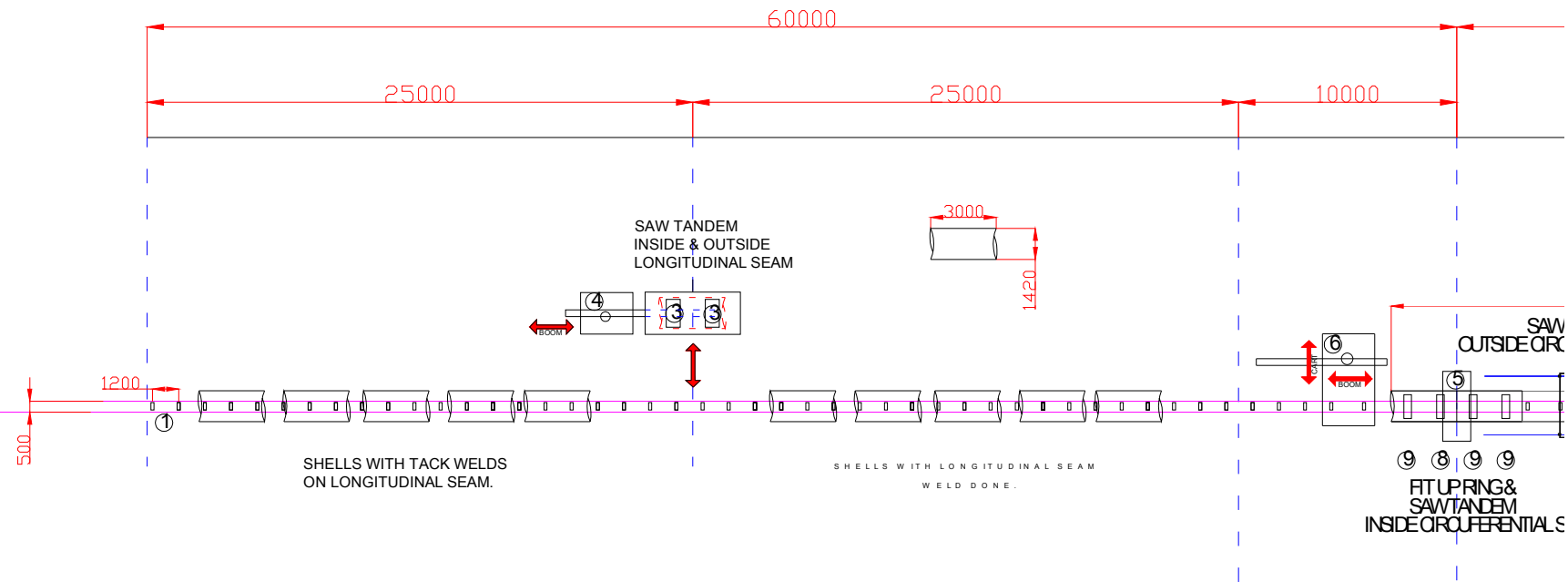
3123 – 43 AVE, EDMONTON AB

T6T 1C7, CANADA

PHONE: 1 780 450 6695

WEB: WWW.IRIZAR.COM

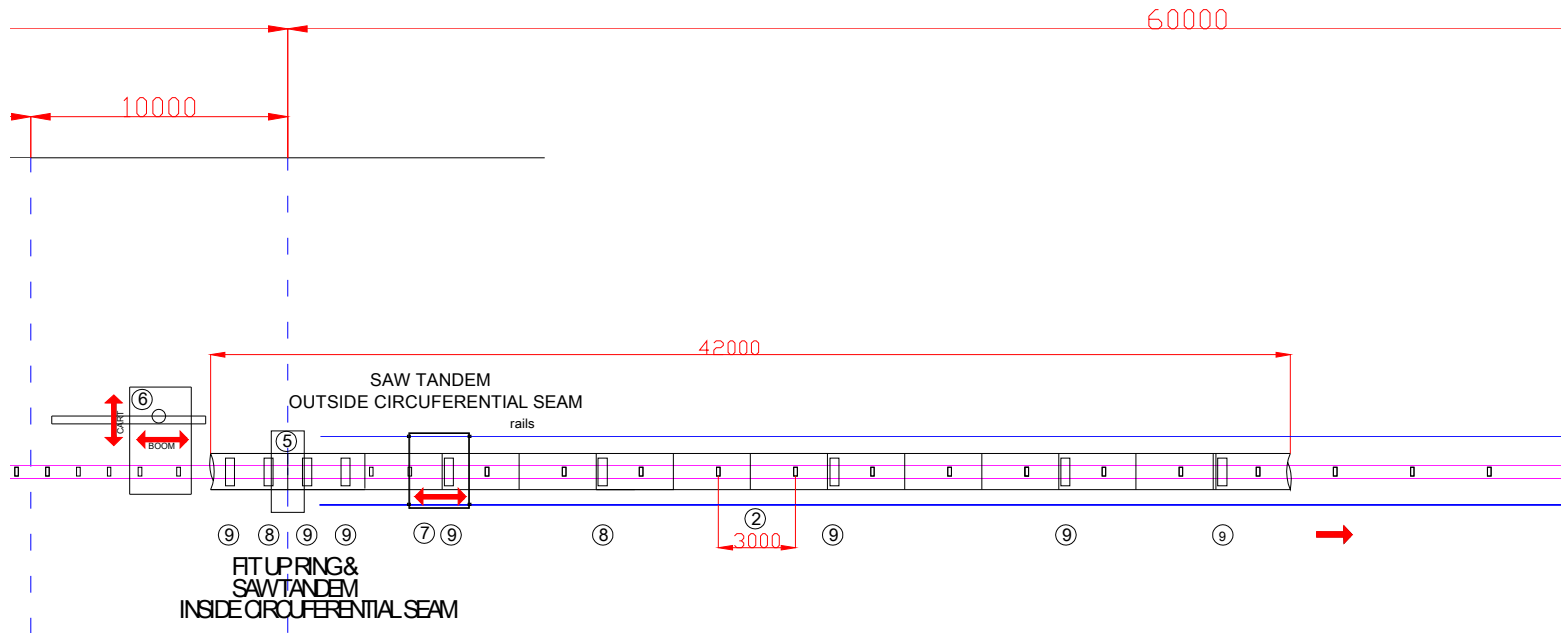
SHEEL STORAGE & LONGITUDINAL  
(INSIDE & OUTSIDE ) SEAMS



PIPE LINE

**IRIZAR HEAVY INDUSTRIES INC**  
 3123 – 43 AVE, EDMONTON AB  
 T6T 1C7, CANADA  
 PHONE: 1 780 450 6695  
 WEB: WWW.IRIZAR.COM

FIT UP & CIRCUNFERENTIAL INSIDE SEAM +  
CIRCUNFERENTIAL OUTSIDE SEAM



**IRIZAR**

PIPE LINE

**IRIZAR HEAVY INDUSTRIES INC**

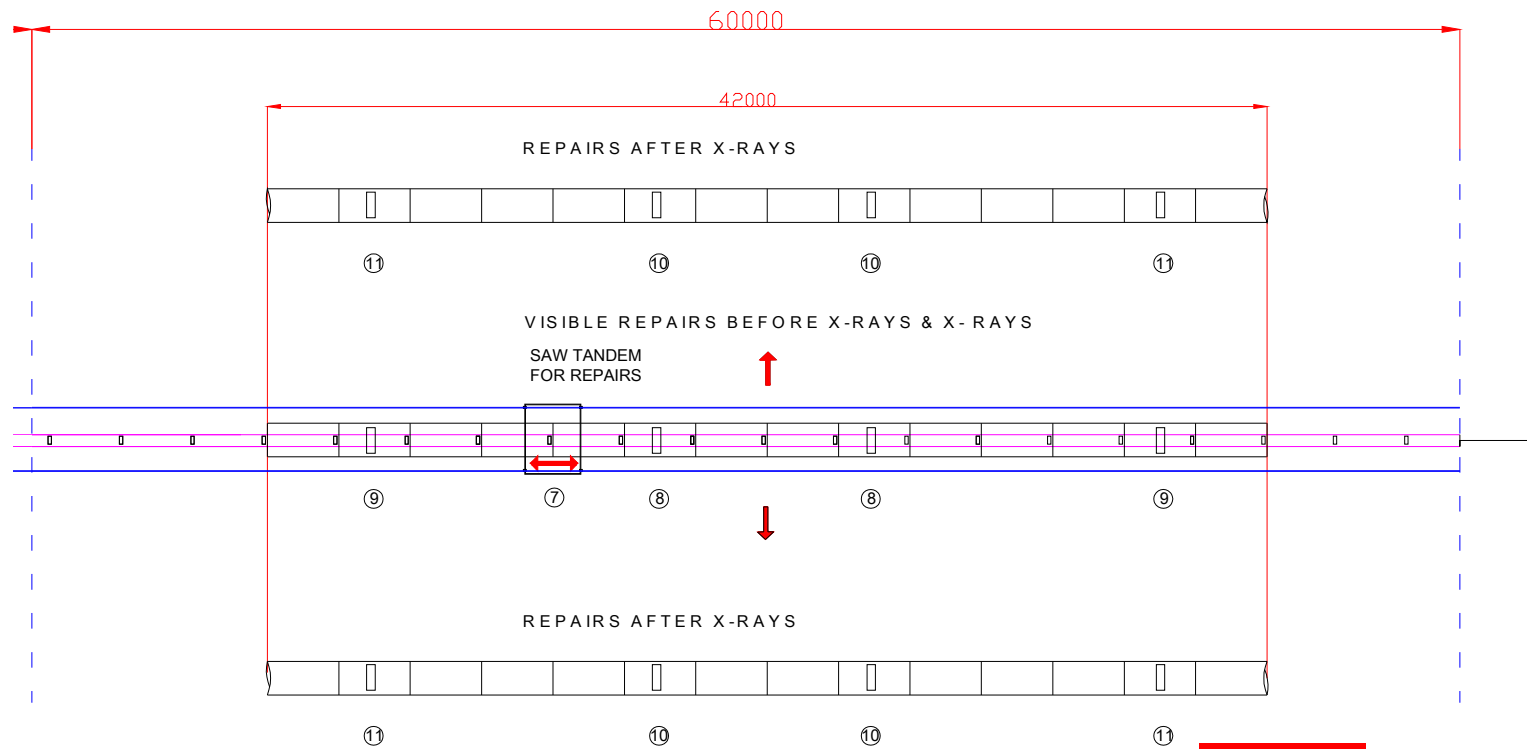
3123 – 43 AVE, EDMONTON AB

T6T 1C7, CANADA

PHONE: 1 780 450 6695

WEB: WWW.IRIZAR.COM

## REPAIRS & X- RAYS



**IRIZAR**

PIPE LINE

**IRIZAR HEAVY INDUSTRIES INC**

3123 – 43 AVE, EDMONTON AB

T6T 1C7, CANADA

PHONE: 1 780 450 6695

WEB: WWW.IRIZAR.COM


**8. QUOTE**

	Line length	60 m	60 m	60 m		
NO	RUSSIAN PIPE LINE (SIBERIA)	Longitudinal Inside & Outside	FIT UP & INSIDE Circumferential & OUTSIDE Circumferential	OUTSIDE Circumferential & Repairs & X Rays	Spare Parts	QTY
	CONCEPT					
1	PFRI, Idler Roller (conveyor line)	50	0	0	3	53
2	PFRD, Drive Roller (conveyor line)	0	20	20	2	42
3	Longitudinal Seam Welding Station: Welding Rotator Model WR 5 (one power + one idler), flux bed, loading/un-loading shell device	1				1
4	Self-Stand Welding Manipulator Model WM 2045 for SAW-Tandem on Longitudinal (inside/outside)	1				1
5	Clamping Ring ECR1420 built with combo WR 60 power. Clamping ring with copper back up, hydraulic side device (left-right), hydraulic up and down device and power rotation		1			1
6	Welding Manipulator WM 2045 with motorized trolley. For SAW-Tandem on Circumferential seams INSIDE only. Extended trolley for install PFRI & PFRD		1			1
7	Mobil Gantry Model GPWM-II for SAW- Tandem on OUTSIDE circumferential seams & OUTSIDE longitudinal seams		1	1		2
8	CWR60P, Power rotator, hydraulic lift of 2", idler feed roller		2	2	0.333	4.333
9	CWR60I, Idler rotator, hydraulic of 2", power feed roller		7	2	0.5	9.5
10	Welding Rotator Model WR 60 (Power + one idler)			4		4
11	Synchronized device		1	3	1	5
12	Rail 38 kg/m, 6.00 m length		30	20		50
13	Lincoln SAW Tandem (DC 1500/AC1200, heads & controls & cables)	1	2	1	0.333	4.333
14	Lincoln DC 600 with Arc Air (carbon gouging) and manual stick weld	1	2	6	0.333	9.333
15	Seam Tracker Model KB-20 for SAW Tandem, 100 kilograms	1	2	1	0.333	4.333
16	Camera, screen of 9", cable and power unit	1	1			2
17	Flux Recovery System Model FRU-100	1	2	1	0.333	4.333





	with heater					
18	Stick Electrode Oven, 150 kg					3
19	Flux Oven, FEO 200, 200 kilograms					4
20	Spare Parts set for Welding Manipulator WM 2045 & Gantry GPWM: 6 pieces of T Verter, 12 limit switch for trolley, 12 limit switch for boom				1	
21	Packing and Shipment of 40' container					6
22	Set up supervision (At buyer expenses, air plane tickets, local transportation, food and accommodation)					30

## 9. **TERMS AND CONDITIONS:**

Price: CIF Riga Latvia Sea Port

Currency: USD (American Dollars)

Electric Input Power (V, Hz, 3P): 380 V, 50 Hz, 3 P

Payment conditions:

- 30%, Down payment
- 70%, Before shipping

Deliver Time Ex Works Factory: 16 to 20 weeks

Warranty: One year

Specifications: [Brochures](#)

Conditions: New

Validity: 30 days

### **Notes**

1. Estimate number of container required: 18 containers of 40' each
2. Our offer is our very best rock price (distributor price)
3. Spare part list will be provided if we get this project