



INTERNATIONAL PIPE INDUSTRY CO.

الشركة العالمية لصناعة المواسير

**STEEL PIPE MILL** LONGITUDINAL SUBMERGED ARC WELDED (LSAW)

**BENDS FACTORY** HOT FABRICATED BENDS

**STEEL FABRICATION WORKS**





INTERNATIONAL PIPE INDUSTRY CO.

الشركة العالمية لصناعة المواسير

## OUR CORE VALUES

- SAFETY AND THE ENVIRONMENT
- ACCOUNTABILITY AND TRANSPARENCY
- PROFESSIONALISM
- COMMUNITY DEVELOPMENT
- COLLABORATION



VIEW THE FUTURE WITH AMBITION

## MISSION

“WE ARE COMMITTED TO PROVIDE STEEL PIPE AND STEEL STRUCTURES SOLUTIONS TO BUILD EXCELLENT RAPPORT WITH EXISTING AND NEW CUSTOMERS WITH CONSISTENT SUPPLY OF QUALITY PRODUCTS AND PRACTICES”.

## VISION

“TO SURVIVE, AND TURNAROUND ACHIEVING SUSTAINABLE GROWTH TO BE THE MOST COMPETITIVE AND DIVERSE PIPE SOLUTIONS’ PROVIDER IN AFRICA”.

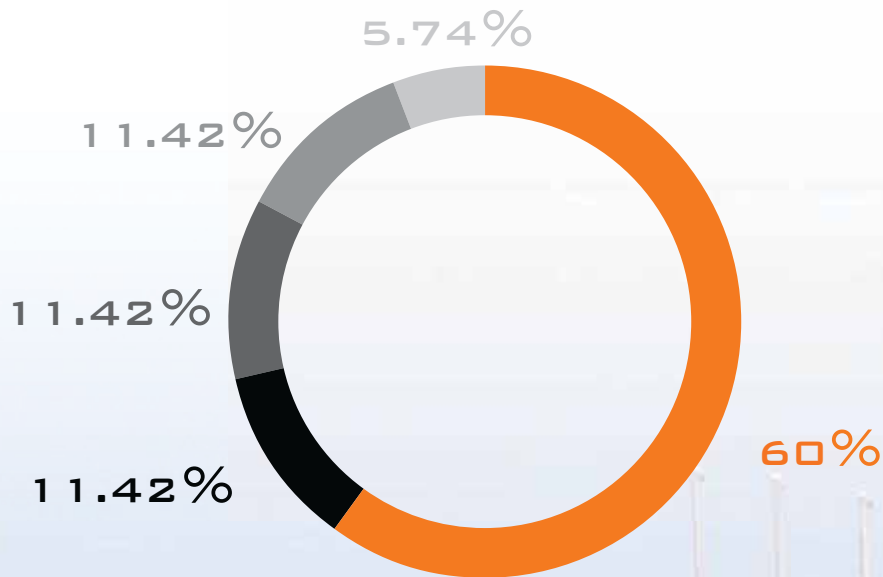


IPIC WAS INCORPORATED AND REGISTERED IN EGYPT SINCE JAN 2001 UNDER THE EGYPTIAN PRIVATE FREE ZONE LAW NO(8) FOR THE YEAR 1997 FOR PROVIDING EGYPTIAN AND INTERNATIONAL OIL AND GAS MARKETS BY PIPE AND BENS FOR OIL AND GAS PIPELINES PROJECTS.

AUTHORIZED CAPITAL	<b>200</b> MILLION USD
PAID-UP CAPITAL	<b>70</b> MILLION USD

# SHAREHOLDERS

- KUWAIT PIPE INDUSTRY & OIL SERVICE CO (KPIOS)
- ENGINEERING FOR PETROLEUM AND PROCESS INDUSTRIES (ENPPI)
- EGYPTIAN NATURAL GAS CO (GASCO)
- THE PETROLEUM AND TECHNICAL CONSULTATION CO.( PETROJET)
- NATIONAL AUTHORITY FOR MILITARY PRODUCTION.

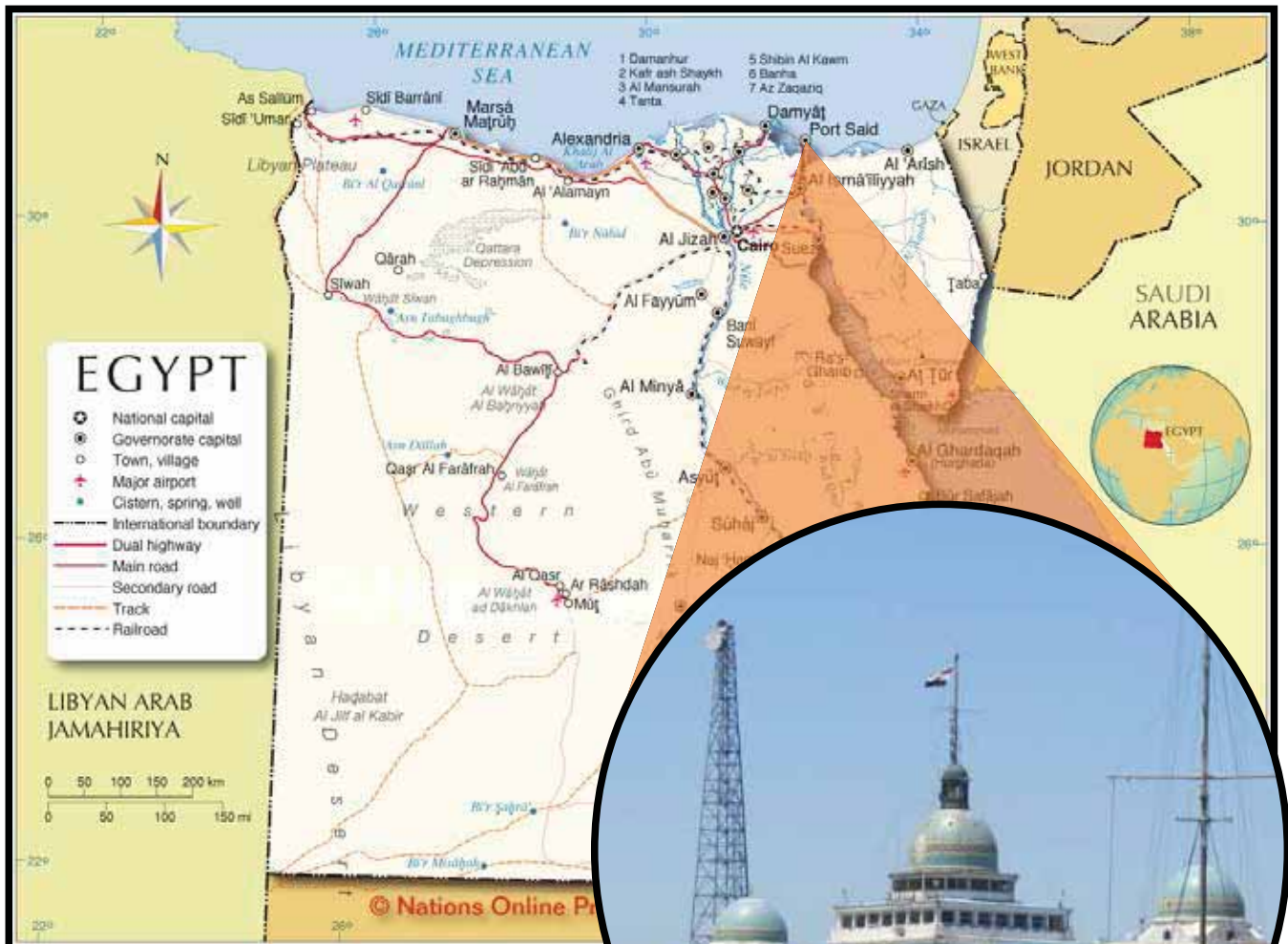




# LOCATION

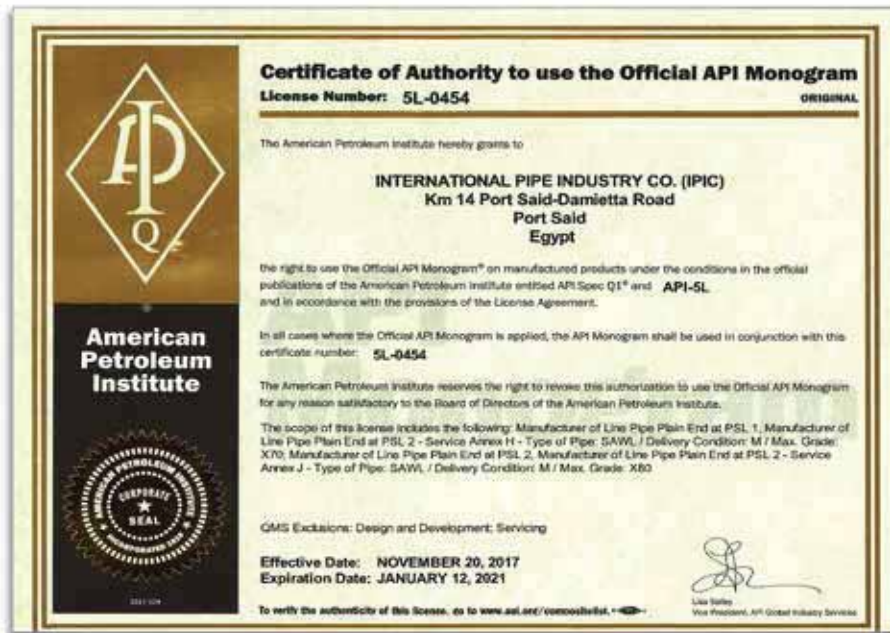
THE FACTORY'S LOCATION WAS SELECTED TO BE ON THE MAIN ROAD BETWEEN EGYPTIAN PORTS, PORT-SAID & DAMIATTA.

THIS LOCATION PROVIDES IPIC WITH MANY ADVANTAGES TO EXPORT PIPES TO EUROPEAN, AFRICAN AND ASIAN COUNTRIES IN LESS TIME.



# CERTIFICATIONS

QUALITY



## API MONOGRAM

IPIC MILLS ARE CERTIFIED BY MANY INTERNATIONAL AUTHORITIES FOR THE PIPE PRODUCT API MONOGRAM WHICH GUARANTEES THAT ALL PIPES PRODUCED BY IPIC HAVE TO COMPLY WITH THE API-5L AS MINIMUM REQUIRMENTS.

AND FOR THE TOTAL QUALITY MANAGEMENT SYSTEM ISO 9001:2015 FOR BOTH PIPES AND BENDS MILLS.

ALSO API Q1 WHICH GUARANTEES THAT THE QUALITY SYSTEM IN IPIC IS IN COMPLIANCE WITH THE API REQUIRMENTS FOR PIPE MAKING.



## API Q1



## ISO 9001:2015



## ISO 9001:2015

## PIPES

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PIPE LENGTH:

8 : 12 METERS

RANGE OF PIPE DIAMETER

16" : 42" (CAPABILITY TO 60")

THICKNESS

8.7 : 27 MM

ANNUAL PRODUCTION

150000 : 250000 TON

DAILY PRODUCTION

160 PIPES PER DAY

MATERIAL IN COMPLIANCE WITH API-5L

UP TO GRADE X-80 OR EQUIVALENT.





# BENDS

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BEND DIAMETER

FROM 6" : 48"

BEND THICKNESS

FROM 8.7 : 38.1 MM

BENDING ANGLE

ANY DEGREE UP TO 180°

MINIMUM BEND RADIUS

3 D R

MATERIAL IN COMPLIANCE WITH API 5L

UP TO GRADE X-80 OR EQUIVALENT.



# QUALITY

## IS OUR CONCERN

IN **IPIC** WE DO BELIEVE THAT QUALITY IS THE WAY TO SPREAD OUR BUSINESS, SO WE DESIGNED OUR PROCESS TO ACHIEVE THE MAXIMUM QUALITY AS:

**60%** OF THE PIPES' MAKING EQUIPMENTS ARE INSPECTION EQUIPMENTS.



**100%** ONLINE INSPECTION POINTS ALONG THE WHOLE PRODUCTION LINE.

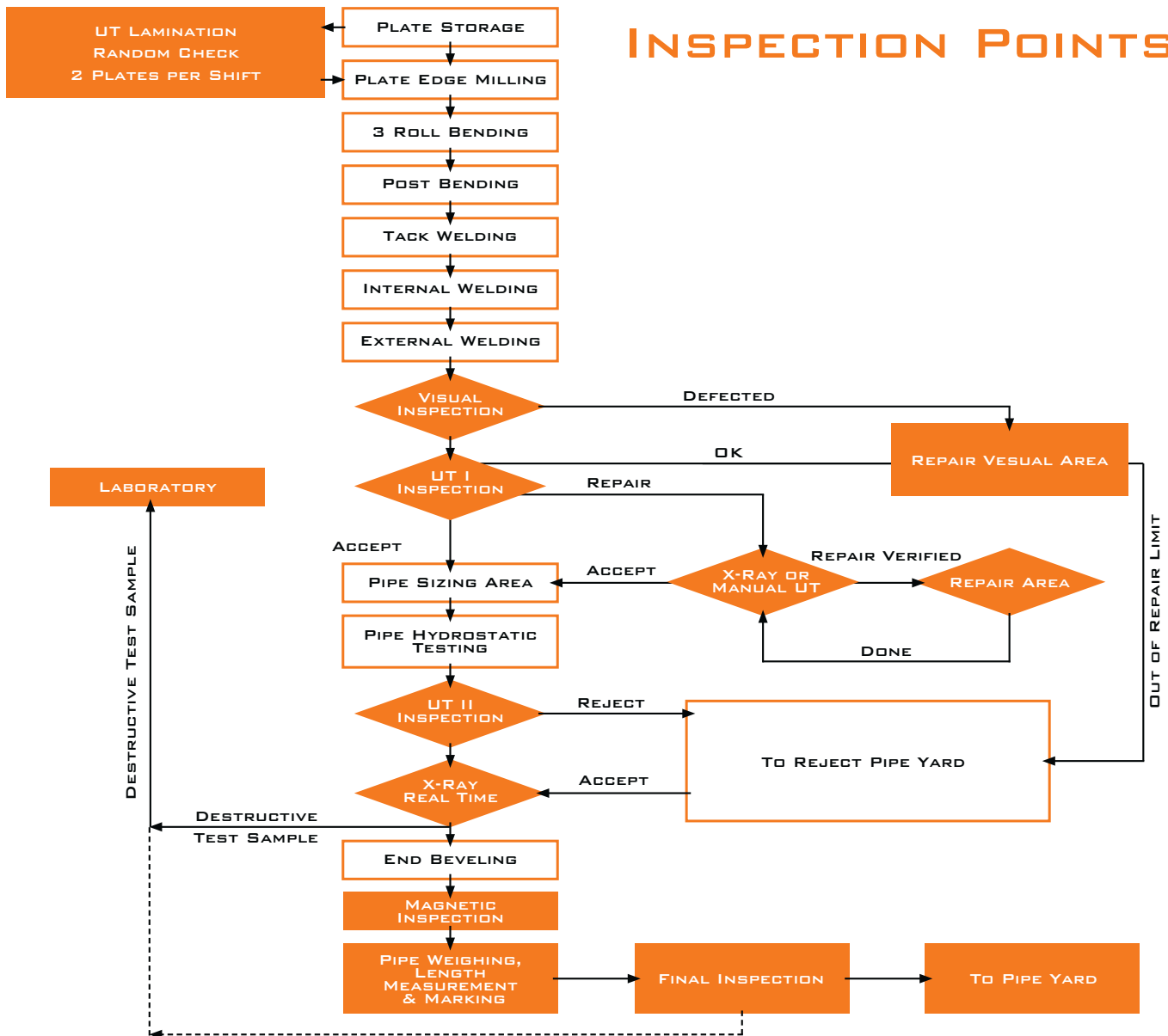


**100%** TRACKING OF ALL PIPES HISTORY DURING MANUFACTURING AND REPORTING CERTIFICATIONS FOR EACH SINGLE PIPE.





## INSPECTION POINTS





# OUR CUSTOMERS

## THANK YOU

BY USING OUR PRODUCTS IN YOUR WORLDWIDE PROJECTS, YOUR PRECIOUS TRUST MOTIVATES US TO ACHIEVE KEEPING THE HIGHEST QUALITY FOR YOUR SATISFACTION.

GASCO	PERENCO
ENPPI	CENTURION
PETROJET	FLOUR
PPC	SONATRACH
ARAMCO	STROYTRANSGAZ
GUPCO (BP)	NATGAS
RASHPETCO (BG)	RASHPECTO
PETROBEL (ENI)	NOSPCO
KHALDA (APACHE)	FAJR
ADCO	SUEZ CANAL AUTH.
NEW ADMIN. CAPITAL	





# MANUFACTURING PROCESS

## LSAW PIPES



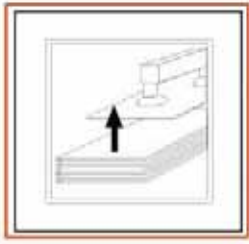


PLATE DESTACKING



EDGE MILLING



3-ROLL FORMING



POST BENDING



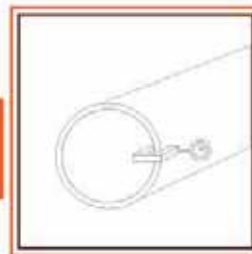
## PIPES PRODUCTION CHART



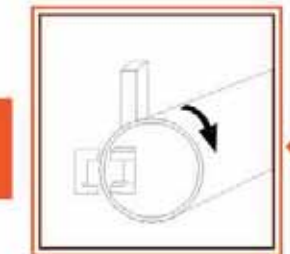
SHIPPING



MARKING AND  
FINAL RELEASE

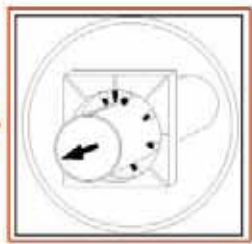


FINAL INSPECTION

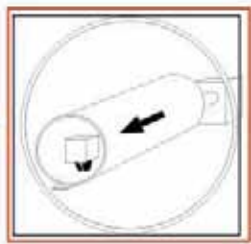


MAGNETIC PARTICLE





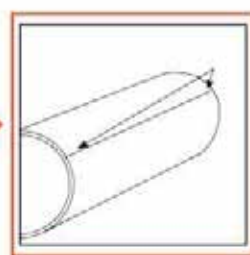
CONTINUOUS TACK  
WELDING



INTERNAL WELDING



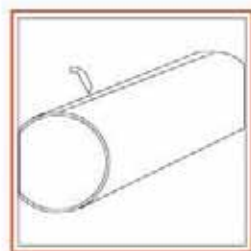
EXTERNAL WELDING



VISUAL INSPECTION



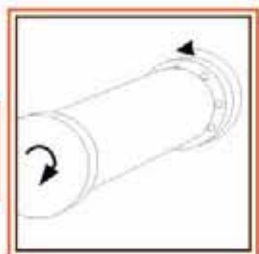
X-RAY CONTROL OF  
WELD REPAIR



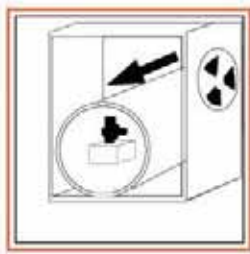
PIPE REPAIR  
(MANUAL)



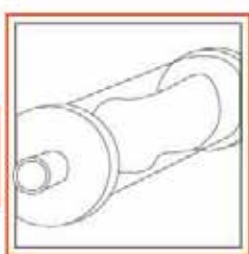
ULTRASONIC TEST



PIPE ENDS BEVELING



X-RAY  
REAL TIME



HYDROSTATIC TEST



FULL BODY EXPANDER



CUTTING TEST



### PIPE DESIGN

PIPE DESIGN DEPENDS MAINLY ON:

- PROPOSED PIPE DIMENSIONS
- WELDING PARAMETERS
- PROPOSED MANUFACTURING PROCEDURE
- PROPOSED QUALITY PLAN

### APPROVAL OF PIPE DESIGN

BEFORE STARTING THE CONTINUOUS PRODUCTION, A FIRST DAY PRODUCTION SHOULD BE CARRIED OUT IN ORDER TO ASSURE THE PROPOSED PIPE DESIGN AND APPROVE IT ACCORDING TO THE INTERNATIONAL STANDARDS AND ALSO CLIENTS' REQUIREMENTS.







### **PLATE EDGES MILLING M/C**

HORIZONTAL FEED MILLING SYSTEM USED TO PREPARE THE STEEL PLATES LONGITUDINAL EDGES FOR WELDING PRIOR TO FORMING OF PIPE BODY, THE MACHINE IS EQUIPPED WITH CNC SYSTEM.

### **3-ROLL BENDING M/C**

IT IS THE MOST ADVANCED PIPE ROLLING M/C, CAPABLE TO ROLL PIPE SIZES STARTING 16" UP TO 60" WITH DIFFERENT WALL THICKNESSES FROM 6.4MM UP TO 30MM WITH DOUBLE RANDOM LENGTH OF 12.2 METERS.





### **POST BENDING M/C**

AS THE 3-ROLL BENDING M/C FORMING 80% FROM FULL ROUNDNESS OF THE PIPE, THE POST BENDING M/C CRIMPS THE PIPE LONGITUDINAL STRAIGHT EDGES TO ACHIEVE 100% ROUNDNESS.

### **CONTINUOUS TACK WELDING**

FIRST WELDING STATION, IN THIS STATION THE PIPE SEAM EDGES ARE JOINED TOGETHER BY CONTINUOUS WELD. THE MACHINE IS ALSO DESIGNED TO ADJUST MISALIGNMENT, HI/LO AND OFFSET BETWEEN THE TWO EDGES PRIOR TO INTERNAL WELDING.





#### **INTERNAL WELDING M/C**

AUTOMATIC SUBMERGED ARC WELDING PROCESS USING THREE OR FOUR WIRES. TWO WELDING MACHINES ARE WORKING PARALLEL TO ACHIEVE HIGHER PRODUCTIVITY.

#### **EXTERNAL WELDING M/C**

FINAL WELDING STAGE FOR THE EXTERNAL SIDE OF THE PIPE SEAM, TWO AUTOMATIC SUBMERGED ARC WELDING MACHINES USING FOUR WIRES.







### **VISUAL INSPECTION**

FIRST INSPECTION STAGE,  
OVERALL VISUAL INSPECTION  
APPLIED TO THE PIPE  
INTERNAL AND EXTERNAL  
SURFACES INCLUDING WELD  
SEAMS.

### **AUTOMATIC ULTRASONIC M/C (STATION 1)**

AFTER VISUAL INSPECTION,  
AUTOMATIC UT INSPECTION  
APPLIED TO ASSURE SOLIDITY  
OF THE PIPE WELD SEAM  
BEFORE COLD EXPANDING.







### **REPAIR STATION (X-RAY ROOM)**

IN CASE OF WELD REPAIR, THE REPAIRED AREAS IN THE PIPE SEAM WELD SUBJECTED TO X-RAY INSPECTION TO EVALUATE AND ASSURE THAT THE DEFECTS HAD BEEN REPAIRED, X-RAY FILM KEPT AS EVIDENCE.

### **COLD EXPANDING M/C**

THE MACHINE IS DESIGNED FOR ADJUSTING PIPE ROUNDNESS AND STRAIGHTNESS, THIS PROCESS ALSO RECOVER THE BASE METAL MECHANICAL PROPERTIES.





#### **HYDRO-STATIC TESTING M/C**

AS PER API 5L SPECIFICATIONS, THE MANUFACTURED PIPE SHOULD BE TESTED HYDROSTATICALLY TO A CERTAIN PRESSURE IDENTIFIED BY THE SPECIFICATION, AUTOMATIC HYDRO-TESTING M/C CAPABLE TO PERFORM THE TEST UP TO 320BAR.

#### **AUTOMATIC ULTRASONIC M/C (STATION II)**

FIRST INSPECTION STATION AFTER COLD EXPANDING AND HYDRO-TESTING, SHEAR ANGLE SOUND BEAMS (UT) INSPECTION TO BE APPLIED TO ASSURE THE SOLIDITY OF THE PIPE SEAM WELD BEFORE FINAL INSPECTION.





### **X-RAY REAL TIME**

X-RAY REAL TIME STATION IS FOR INSPECTION OF SEAM WELD AFTER (UT II)

FULL SCAN OF THE PIPE SEAM WELD APPLIED FOR VERIFICATION OF ANY COMMENTS FROM THE PREVIOUS SATATION AND PIPE ENDS RADIO-GRAPHED TO ASSURE THAT PIPE ENDS ARE FREE OF DEFECTS.

### **END BEVELING M/C**

FOR PIPE ENDS PREPARATION TO THE REQUIRED ANGLE AND ROOT FACE ACCORDING TO THE PROJECT SPECIFICATIONS. THE STATION IS CONSISTS OF TWO END BEVELING MACHINE WORK TOETHER AT THE SAME TIME.





### MAGNETIC PARTICLE TESTING

TO INSPECT PIPE BEVELED ENDS SURFACE FOR DEFECTS AFTER END BEVELING.

### FIANL INSPECTIPON:

VISUAL AND DIMENSIONAL CHECK APPLIED TO THE FINAL PRODUCT, THIS INSPECTION STAGE INCLUDES PIPE LENGTH MEASURING, PIPE WEIGHING, PIPE STRAIGHTNESS AND OVALITY MEASURMENT IN ADDITION TO OVERALL VISUAL INSPECTION OF PIPES' INTERNAL AND EXTERNAL SURFACES.







### **PIPE TRACKING SYSTEM :**

IPIC APPROVED AN INTERNAL COMPUTERIZED SYSTEM FOR TRACKING AND RECORDING ALL THE PIPES PRODUCTION DATA STARTING FROM STEEL PLATES RECORDING UP TO FINAL PRODUCTS DISPATCHING TRACKING AND RECORDING ALL PIPE MAKING HISTORY IS A PARALLEL PROCESS TO QUALITY CONTROL PROCESS.

TRACKING SYSTEM COULD BE USEFUL IN GENERATING THE FOLLOWING REPORTS AUTOMATICALLY:

- DAILY, WEEKLY, MONTHLY AND ANNUALLY PRODUCTION REPORTS.
- PIPE HISTORY INCLUDING ALL STATIONS OUTPUTS.
- FINISHED PRODUCTS REPORTS.
- PIPES CERTIFICATIONS OF QUALITY.



# PIPE PRODUCTION RANGE FOR 40FT. (12.2M) LONG PIPES

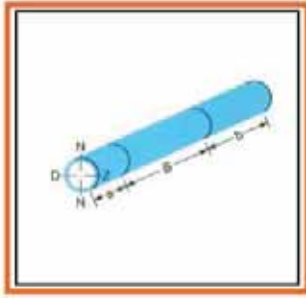
Diameter	Pipe Thickness							
	Grade X-52		Grade X-60		Grade X-65		Grade X-80	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16"	8.7	15.0	8.7	14.6	8.7	14.2	8.7	12.7
18"	8.7	18.0	8.7	17.2	8.7	17.0	8.7	15.0
20"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
22"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
24"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
26"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
28"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
30"	8.7	21.2	8.7	20.6	8.7	20.0	8.7	17.9
32"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
34"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
36"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
38"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
40"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
42"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
44"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
46"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
48"	8.7	27.0	8.7	26.2	8.7	25.4	8.7	23.8
52"	9.5	27.0	9.5	26.2	9.5	25.4	9.5	23.8
56"	9.5	27.0	9.5	26.2	9.5	25.4	9.5	23.8
60"	9.5	27.0	9.5	26.2	9.5	25.4	9.5	23.8

AVAILABLE TOOLING UP TO SIZE 42" ONLY

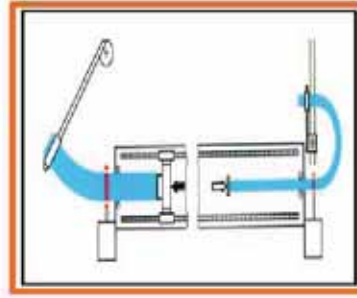
# MANUFACTURING PROCESS

## INDUCTION BENDS





INSPECTION OF  
MOTHER PIPES



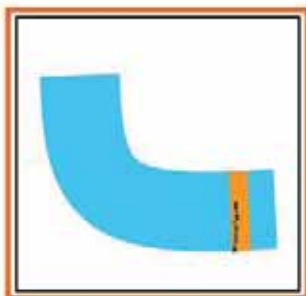
HOT BENDING MACHINE



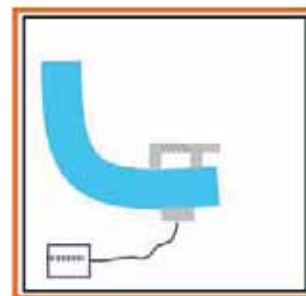
DIMENSIONS CHECK  
BEFORE HEAT TREATMENT



## HOT BENDING PRODUCTION CHART



FINAL INSPECTION & MARKING



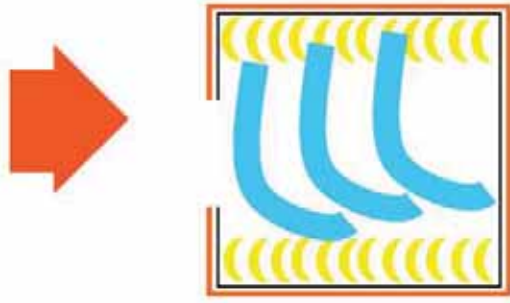
MAGNETIC PARTICLE  
& UT FOR LAMINATION



EDGE BEVELING



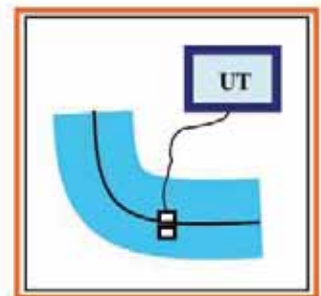




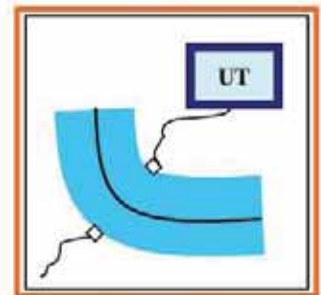
HEAT TREATMENT FURNACE



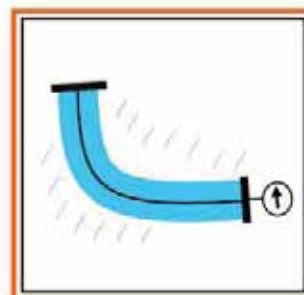
DIMENSIONS CHECK  
AFTER HEAT TREATMENT



UT ALONG  
SEAM WELD



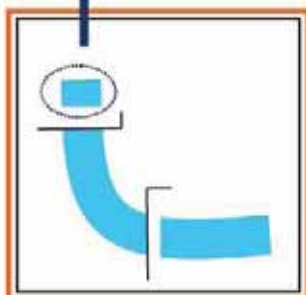
UT THICKNESS  
ON BENDED AREA



HYDROSTATIC TEST



DESTRUCTIVE TEST



CUTTING ENDS TO LENGTH





### **INDUCTION BENDING M/C**

THE MACHINE USED THE INDUCTION BENDING THEORY TO CONVERT THE STRAIGHT PIPE INTO BEND.

THE POWERFULL DESIGN OF THE MACHINE ALLOWS PRODUCING OF 3D INDUCTION BENDS AND ANY ANGLE UP TO 180 DEGREE.

### **DIMENSIONS CHECK**

VISUAL AND DIMENSIONS CHECK PERFORMED ON BEND BEFORE AND AFTER HEAT TREATMENT IN ORDER TO ASSURE AND GUARANTEE THE REQUIRED DIMENSIONS.





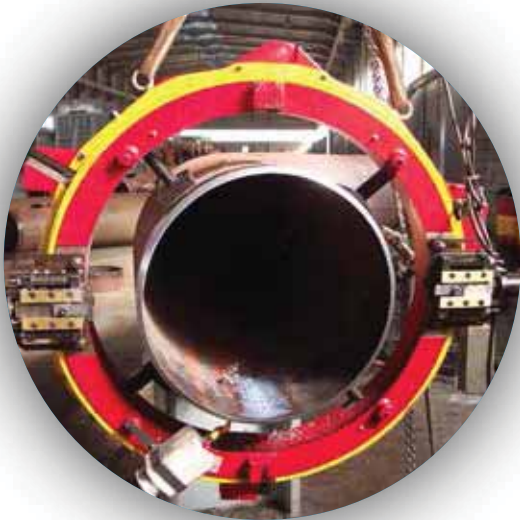
### HEAT TREATMENT

DEPENDING ON THE REQUESTED MECHANICAL PROPERTIES, THE BEND MAY BE HEAT TREATED AFTER BENDING IN ORDER TO ACHIEVE THE AIMED MECHANICAL PROPERTIES

### HYDROSTATIC TEST

ACCORDING TO CLIENT REQUIREMENT AND THE BEND USAGE, HYDROSTATIC TEST MAY BE CARRIED OUT ON ALL BENDS OR SAMPLE BEND FOR QUALIFICATION.





### END BEVELING M/C

FOR BENDS ENDS PREPARATION, TO THE REQUIRED ANGLE AND ROOT FACE ACCORDING TO THE PROJECT SPECIFICATIONS.

### INSPECTION

VISUAL AND DIMENSIONAL CHECK PERFORMED ON EACH BEND, THE INSPECTION STAGES INCLUDE BUT NOT LIMITED TO BEND OVALITY MEASUREMENT, UT ON SEAM WELD AND BENDS' ENDS TEST FOR LAMINATION.





# STEEL FABRICATION WORKS





### **STEEL FABRICATION WORKS**

AT THE SAME FACILITY IN PORT SAID, IPIC HAS RECENTLY ESTABLISHED A NEW PRODUCTION LINE FOR STEEL FABRICATION WORKS IN COMPLIANCE WITH THE INTERNATIONAL STANDARDS: ASME – AISC – BS – EN.





#### IPIC PRODUCTION INCLUDES

- STEEL STRUCTURE
- STORAGE TANKS
- PIPING SPOOLS
- STEEL TOWERS
- SANDBLASTING
- METRIC FITTINGS







## LABORATORIES

IN ORDER TO ASSURE THE INDEPENDENCY OF IPIC QUALITY, WE DESIGNED AN INDEPENDENT LABORATORY WHICH IS ONE OF THE MOST ADVANCED AND CERTIFIED CHEMICAL & MECHANICAL LABS IN EGYPT AND MIDDLE EAST.

THIS LAB IS EQUIPPED WITH MOST ADVANCED AND UPDATED TESTING EQUIPMENTS TO FULFILL ALL THE REQUIRED TESTING EQUIPMENTS TO FULFILL ALL THE REQUIRED TESTS FOR BOTH PIPES AND PLATES IN COMPLIANCE WITH INTERNATIONAL CODES AND STANDARDS.

ALSO IPIC OWNS THE MOST ADVANCED LABORATORY IN THE MIDDLE EAST SPECIAIZED IN SOUR SERVICES RELATED TESTS (HIC) FOR BOTH STEEL PLATES AND PIPES IN COMPLIANCE WITH NACE INTERNATIONAL STANDARDS, SUCH TESTS REQUIRED HIGHEST LEVEL OF SAFETY PRECAUTIONS AND ADVANCED PROCEDURES.

THE LABORATORY NOT ONLY SERVES IPIC MILLS BUT ALSO SERVES MANY OTHER COMPANIES AND FACTORIES IN EGYPT THAT TRUST OUR LABORATORY AND COUNT ON US ALSO IN TESTING THEIR SPECIMENS.



## **IPIC LAB ENGINEERING SERVICES:**

### **1- MATERIAL TESTING (DESTRUCTIVE & NON-DESTRUCTIVE TESTS):**

#### **A- ULTRASONIC TESTING**

#### **B- MAGNETIC PARTICLES INSPECTION**

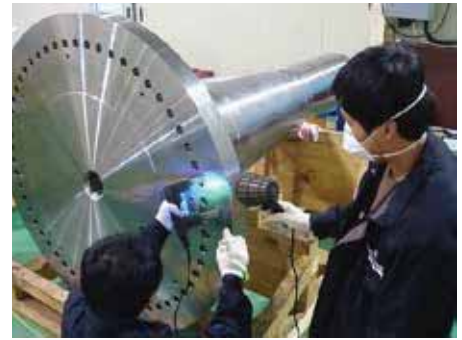
#### **C- LIQUID PENERTRANT TESTING**

#### **D- RADIOGRAPHIC TESTING**

#### **E- DESTRUCTIVE TESTING LAB:**

- MATERIAL CONFORMANCE WITH CLIENT REQUIREMENTS
- QUALIFICATION OF WELDING PROCEDURES/ OPERATORS
- CAPABILITY OF PERFORMING: TENSILE - BENDING - IMPACT - DWTT

### **2- HEAT TREATMENT OF SPECIFIC PRODUCTS: PROGRAMMABLE LPG OPERATED FURNACE EQUIPPED 12 THERMOCOUPLE CHANNELS FOR STRESS RELIEF & TEMPERING PROCESSES.**





## RESEARCHES AND DEVELOPMENT

INDUSTRY IS THE ART OF INVENTION AND DEVELOPMENT , THE LIFE TIME FOR ANY FACTORIES DEPENDS MAINLY ON HOW THESE FACTORIES CAN IMPROVE AND DEVELOP THEIR INDUSTRIES TO MATCH FUTURE NEEDS.

R&D ACTIVITIES IN IPIC ARE NOT LIMITED ONLY FOR IMPROVING THE INDUSTRY AND FINAL PRODUCTS BUT ALSO CREATING NEW IDEAS FOR THE WHOLE BUSINESS.

## HUMAN RESOURCES DEVELOPMENT

ONE OF THE MOST IMPORTANT INVESTMENT IN OUR BUSINESS IS HUMAN RESOURCES.

PEOPLE ARE MAKING THE DIFFERENCE IN ANY FIELD, SO WE PAY SPECIAL ATTENTION IN TRAINING FOR OUR EMPLOYEES TO THE HIGHEST LEVEL OF KNOWLEDGE.



**THE MILL IS ENVIRONMENTALLY FRIENDLY**



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**E-MAIL :** INFO@IPIC-EG.COM

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#### **PORT-SAID**

**ADDRESS :** KM. (14) PORT-SAID DAMIATTA ROAD.

**PHONES :** (+2) 066 3 580 578

: (+2) 066 3 580 579

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