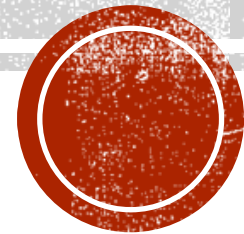




FIELD / CONSTRUCTION



Randall D. Hand
Training Coordinator
Alabama Public Service Commission

NOTICE OF CONSTRUCTION

OPERATOR NAME: _____

DISTRICT: _____

NOTIFICATION DATE: _____, CONTACT: _____ PH: _____

CONSTRUCTION LOCATION: _____

CHECK (✓) WHERE APPROPRIATE.

CONSTRUCTION PERFORMED BY: OPERATOR _____, or CONTRACTOR _____

CONTRACTOR NAME: _____, or UNKNOWN AT THIS TIME _____

TYPE MATERIAL: STEEL _____, or POLYETHYLENE _____

RELOCATION _____, REPLACEMENT _____, or EXTENSION _____

APPROXIMATE PROJECT LENGTH: _____ Feet of main or pipeline.

PIPE SPECIFICATIONS:
O. D. _____ (in.), Wall t _____ (in.), or SDR _____ (P. E. only), SMYS (Steel only) _____

CLASS LOCATION: 1 _____, 2 _____, 3 _____, 4 _____

MAOP _____ (spig) TEST PRESSURE _____ (psig), air _____, or water _____

Do you consider this line to be a distribution main _____, or a transmission pipeline _____?

ANTICIPATED STARTING DATE OF CONSTRUCTION: _____

DIG SAFELY, CALL FOR A LINE LOCATE 48 HOURS BEFORE EXCAVATING!

PLEASE SUBMIT THIS NOTICE 2 WEEKS PRIOR TO CONSTRUCTION:

RETURN TO:

ALABAMA PUBLIC SERVICE COMMISSION
GAS PIPELINE SAFETY
P O BOX 304260
MONTGOMERY, AL 36130-4260
OR

NOTICE OF CONSTRUCTION FORM

Notification of any pipe being installed, 1000 ft or more this includes mains and services.

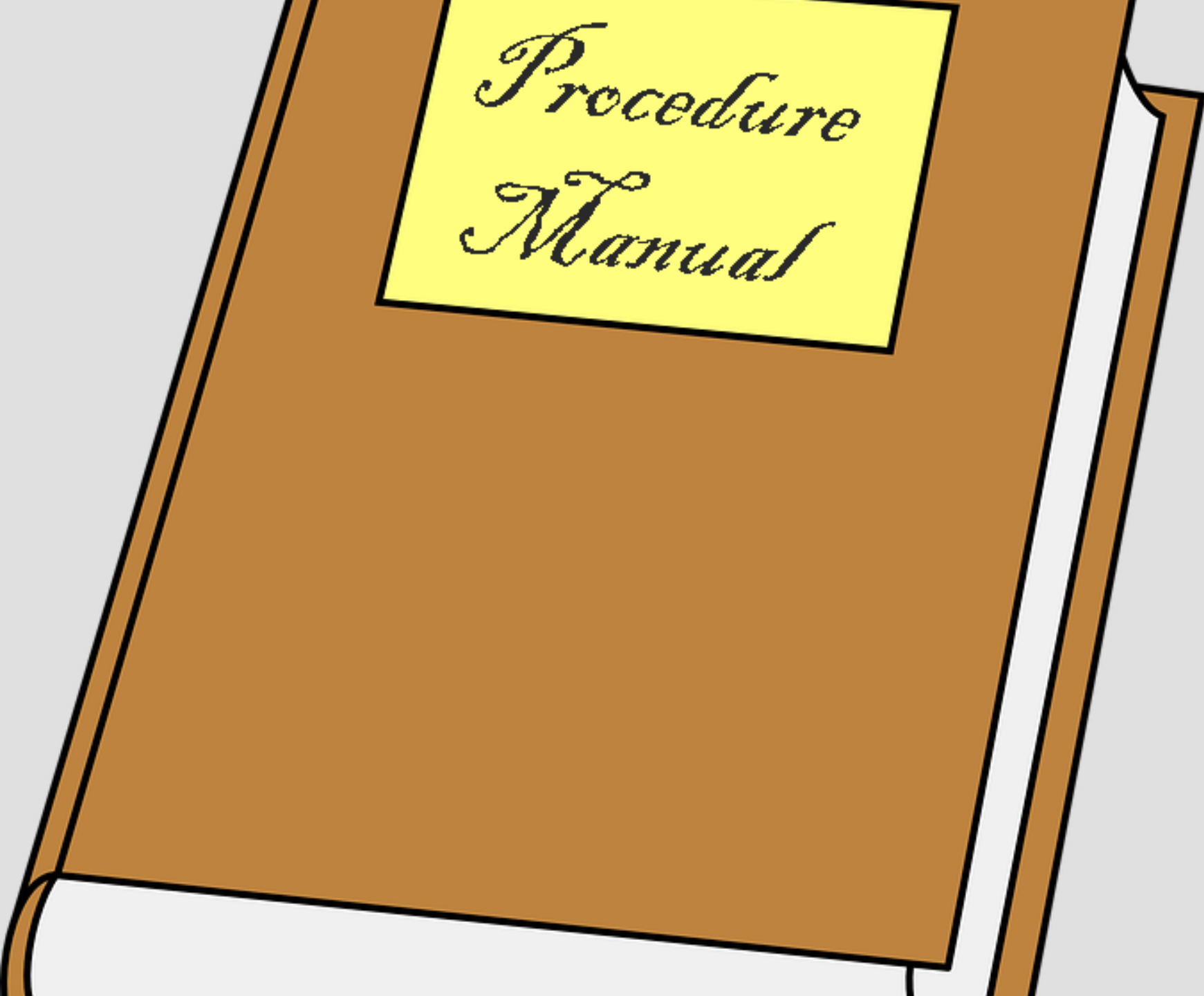
Must be made at least two weeks prior to starting project.

Must contain a valid address or street intersection.



PROCEDURES





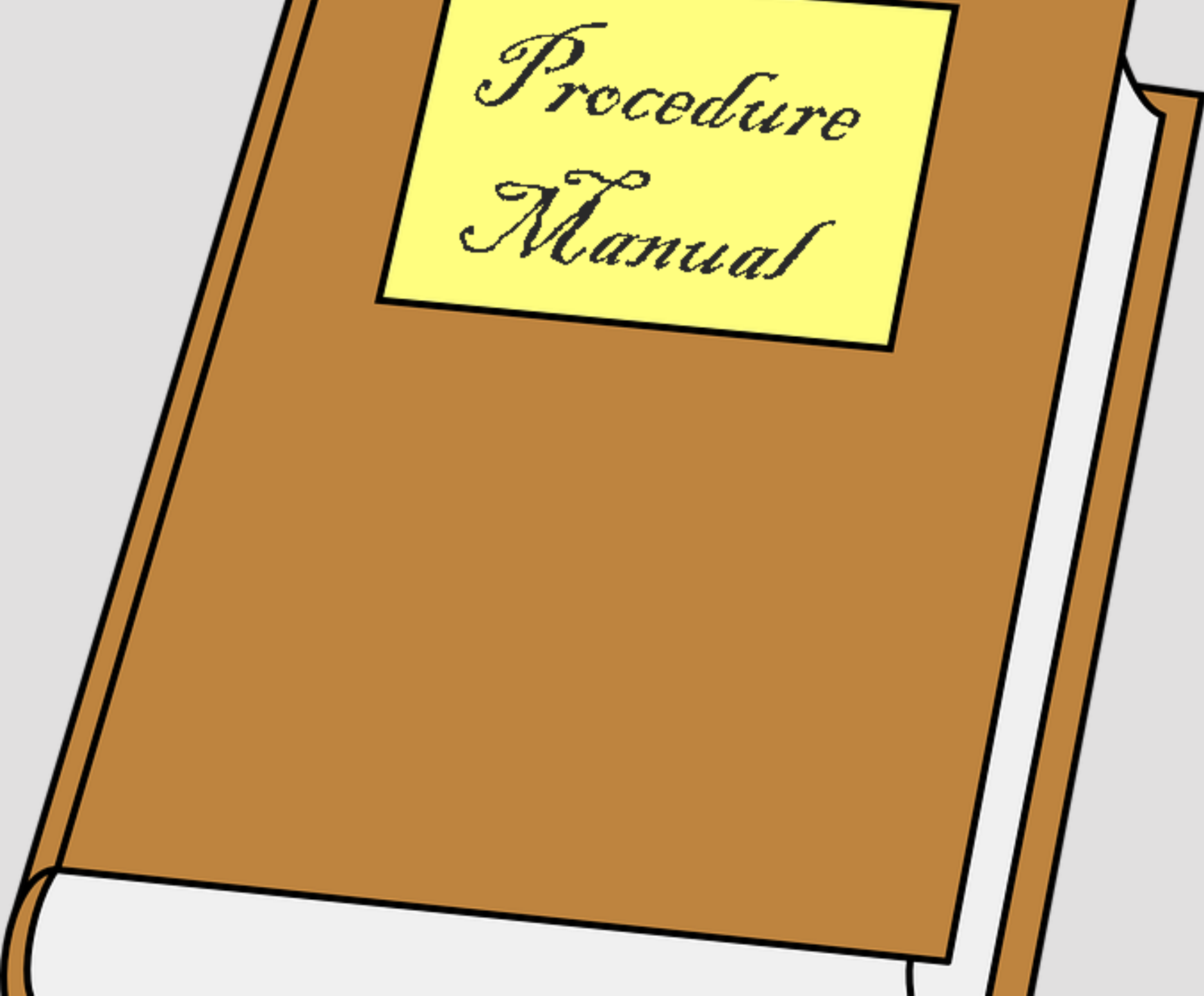
Procedure Manual

PROCEDURES

Common Issues that we are finding on job sites.

- 1- Procedures must be on the job site.
- 2- Procedures must be accessible.
- 3- Individuals must know how to take the Manual and locate specific Procedures.





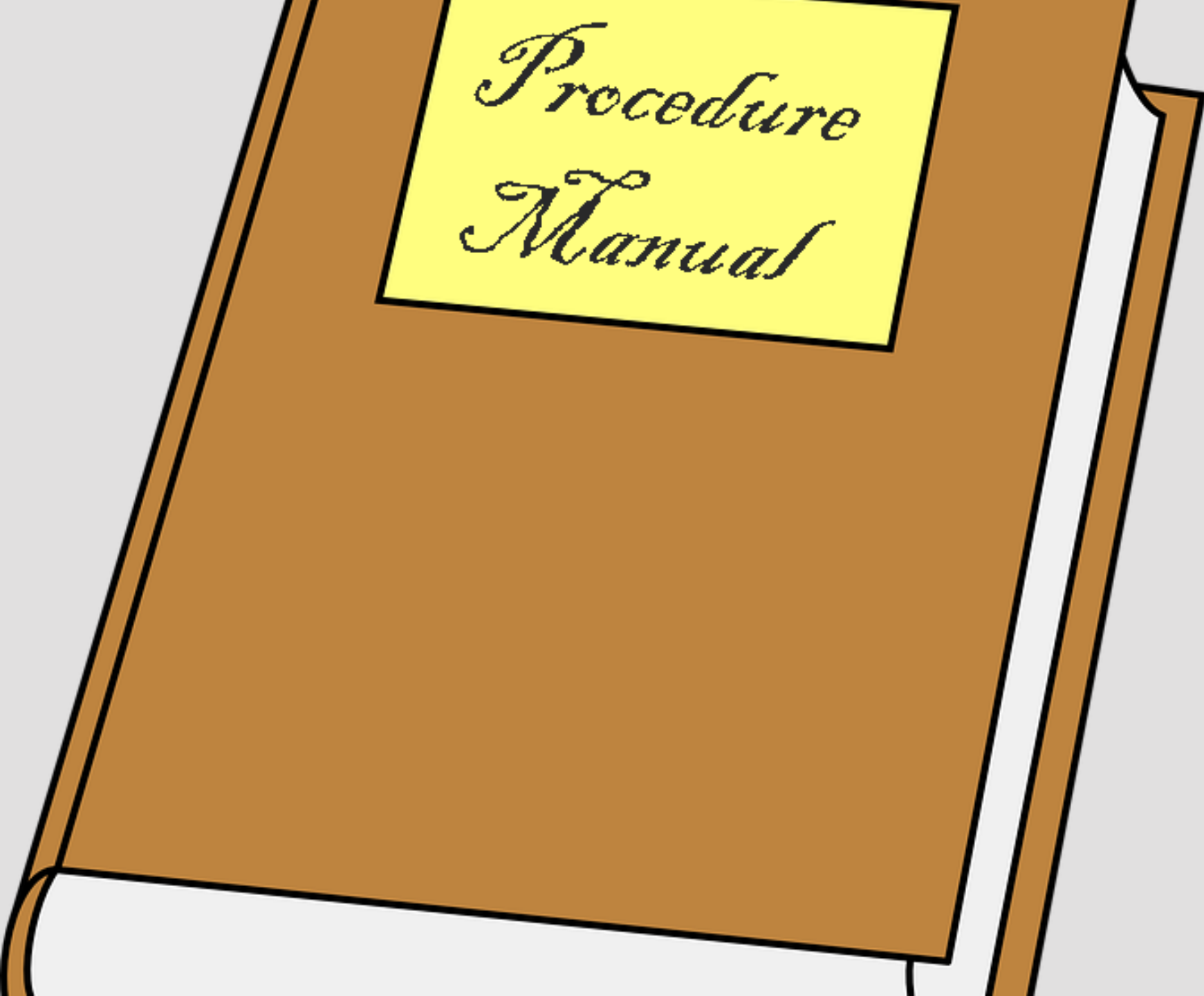
Procedure Manual

PROCEDURES

Procedures must be on the job site

192.605 (a) ... appropriate parts of the manual must be kept at location where operations and maintenance activities are conducted.





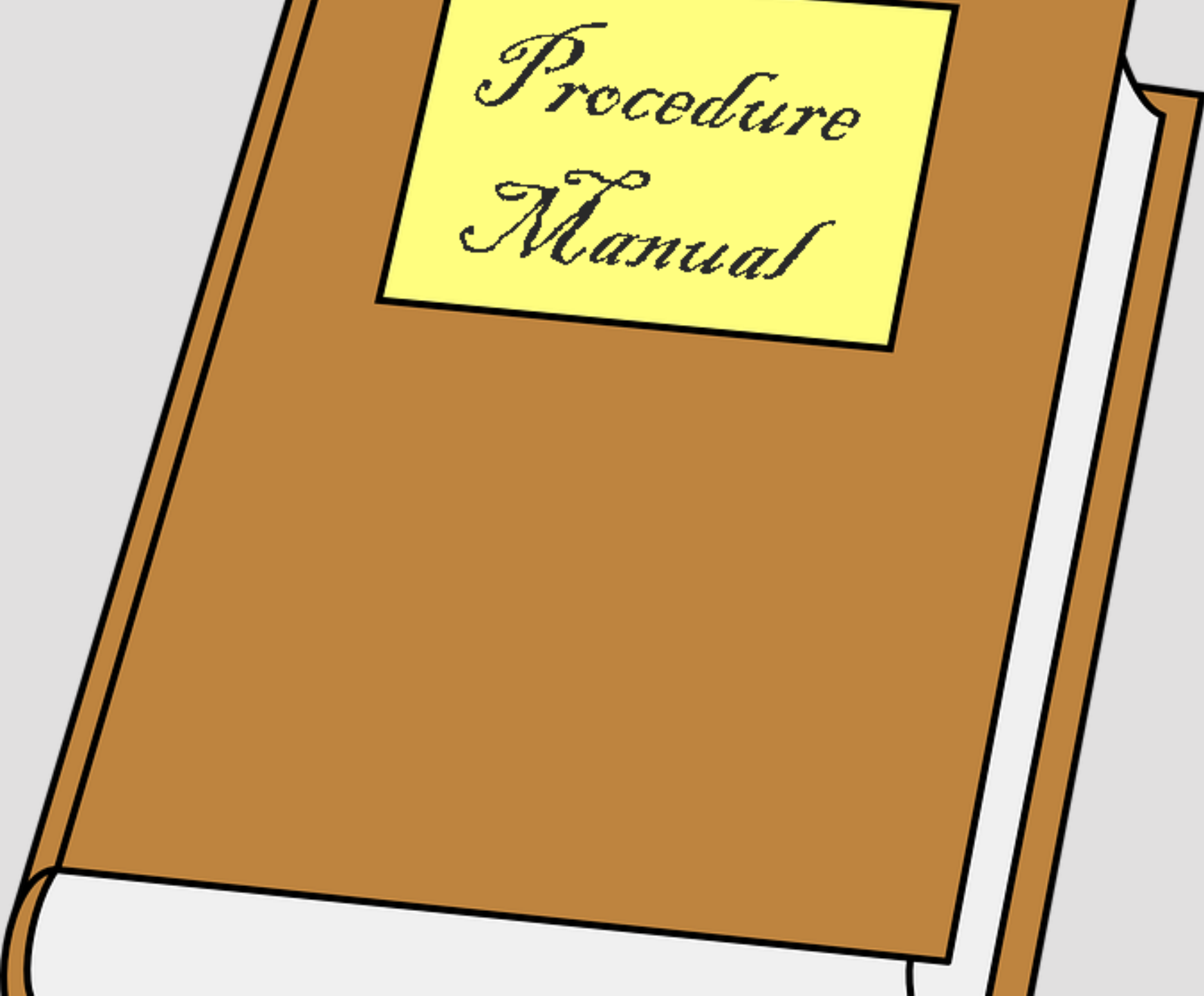
Procedure Manual

PROCEDURES

Manual can be web based/ cloud based etc.

If it is kept electronically, you must know how to access it. You can have written instructions to “walk” you through the process, but you can not call “the office” and get them to help you. This is not acceptable you must be able to access it on your own in the field.





Procedure Manual

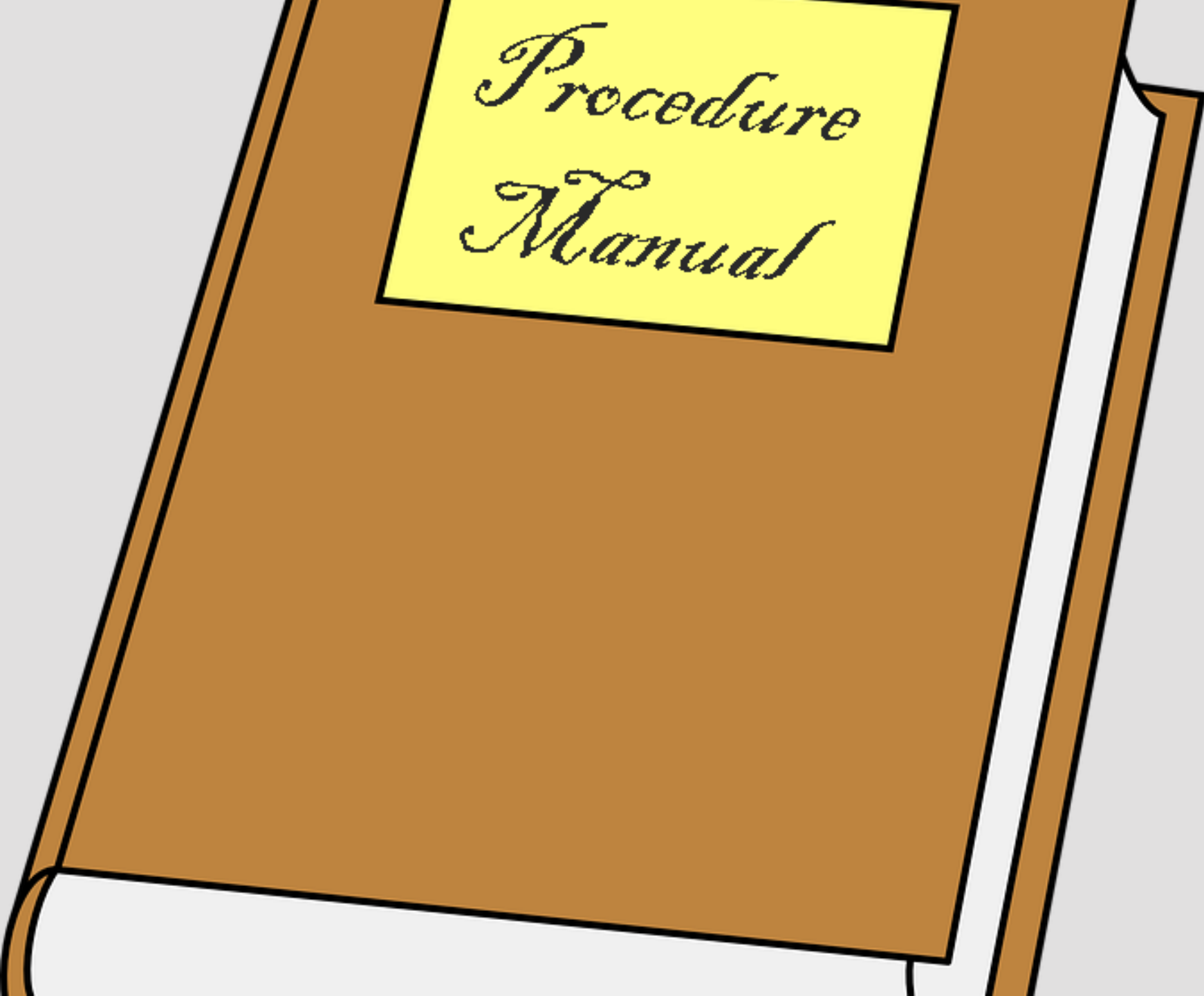
PROCEDURES

Procedures listed in the manual that are being performed must be followed as they are written.

If procedure is not being followed as written, it can result in a violation .

Can not skip a section because “it doesn’t work that way” or “we don’t do it that way”





Procedure Manual

PROCEDURES

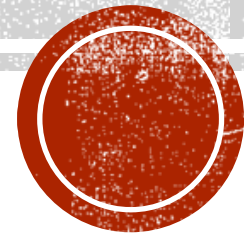
If procedures are found to be irrelevant , incorrect, outdated etc.

Let someone know!

There is a process to change them
and it is not complicated.



ON-SITE INSPECTORS



SIMPLE INSPECTOR REQUIREMENTS

Your chosen inspector should have

- The Procedures based on the task that they are inspecting.
 - Knowledge of what they are looking at/for !



PROOF OF QUALIFICATION

Qualification proof should be kept on the job site. Each individual performing covered task must have proof of qualification.

GAS OPERATIONS AND CONSTRUCTION ASSIGNED TASK:
Gas Operations and Construction Assigned Tasks:
Abandoning of Service - Lines and Mains Conducting Gas Leakage Surveys * Corrosion Control -
Applying Pipe Coating in the Field as part of Maintenance Corrosion Control - Checking/Replacing
Electrical Isolation Couplings on Existing Pipelines Corrosion Control - Cleaning and Coating Pipe for
Atmospheric Corrosion
Corrosion Control - Clearing a Shorted Casing Corrosion Control - Conducting a Soil Resistivity Survey
Corrosion Control - Inspecting for Atmospheric Corrosion Corrosion Control - Inspecting Shorted
Coatings and Rechecking after Clearing a Short Corrosion Control - Inspecting the Condition of Exposed
Pipe or Pipe Coating Corrosion Control - Installation/Replacement of an Anode on an Existing Pipeline
Corrosion Control - Installation/Replacement of Protection Rectifier on an Existing Pipeline
Measurement Corrosion Control - Interference Testing Corrosion Control - Measuring Pipe-to-Soil
Potential Corrosion Control - Visually Inspecting for Internal Corrosion Damage Prevention and
Excavation Inserting Plastic Pipe into a Casing
Inspecting and Operating Valves Inspecting/Repairing a Recording Gauge at Pressure Regulator
Stations
Investigating Leak and Odor Complaints

**OPERATOR QUALIFIED
IN NATURAL GAS**
RANDALL HAND

**GAS OPERATIONS
&
CONSTRUCTION**

APGA Security and Integrity Foundation
Operator Qualification Training & Evaluation
Certificate of Completion
Name: **Randall Hand** Date: **September 13, 2006**
This Certificate Confirms that the Named Attendee has Successfully
Completed Training & Evaluation for the ASME B31Q Covered Tasks Listed
on the Back of this Card.
For Verification of Completion or Questions Regarding
Qualification Please Call (202)370-6211

Bert Kalisch—President/CEO
APGA Security and Integrity Foundation



PROOF OF QUALIFICATION

GAS OPERATIONS AND CONSTRUCTION ASSIGNED TASK:
Gas Operations and Construction Assigned Tasks:
Abandoning of Service - Lines and Mains Conducting Gas Leakage Surveys * Corrosion Control -
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Pipe or Pipe Coating Corrosion Control - Installation/Replacement of an Anode on an Existing Pipeline
Corrosion Control - Installation/Replacement of Protection Rectifier on an Existing Pipeline
Corrosion Control - Installing or Replacing a Corrosion Test Station on Existing Pipeline for Electrical
Measurement Corrosion Control - Interference Testing Corrosion Control - Measuring Pipe-to-Soil
Potential Corrosion Control - Visually Inspecting for Internal Corrosion Damage Prevention and
Excavation Inserting Plastic Pipe into a Casing
Inspecting and Operating Valves Inspecting/Repairing a Recording Gauge at Pressure Regulator
Stations
Investigating Leak and Odor Complaints

**OPERATOR QUALIFIED
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Bert Kalisch
Bert Kalisch—President/CEO
APGA Security and Integrity Foundation

Qualification proof should have task that the individual is covered to perform

Date that Qualification was obtained and requalification date.



PROOF OF FUSION QUALIFICATION



QUALIFICATION OF JOINING POLYETHYLENE CERTIFIES THAT PROCEDURE:

Randall D. Hand

UNV-2708B

UNV-2708SA

UNV-2708SO

UNV-4710B

UNV-4710SA

UNV-4710SO

CENTRAL

MTDTRIFUSION

QUAL. NO: 14344

COMPLETED REQUIREMENTS FOR
QUALIFICATION ON GAS PIPE FOR:
PE2708/4710 RESIN PPI VALIDATED

- BUTT FUSION
- SOCKET FUSION
- SADDLE FUSION
- MECHANICAL JOINT
- ELECTROFUSION

4/7/2017

DATE

WR

ADMIN, GAS
PIPELINE
SAFETY

Proof of qualification for fusion,
MUST BE WITH THE INDIVIDUAL
doing the fusing.

Fusion Qualification must be done at
least once every 12 months not to
exceed 15 months



PROOF OF FUSION QUALIFICATION



QUALIFICATION OF JOINING POLYETHYLENE CERTIFIES THAT PROCEDURE:

Randall D. Hand

UNV-2708B

UNV-2708SA

UNV-2708SO

UNV-4710B

UNV-4710SA

UNV-4710SO

CENTRAL

MTDTRIFUSION

QUAL. NO: 14344

COMPLETED REQUIREMENTS FOR
QUALIFICATION ON GAS PIPE FOR:
PE2708/4710 RESIN PPI VALIDATED

BUTT FUSION

SADDLE FUSION

SOCKET FUSION

ELECTROFUSION

MECHANICAL JOINT

ADMIN, GAS
PIPELINE
SAFETY

4/7/2017

DATE

WR

The fusion qualification that the PSC provides is
ONLY good for

UNIVERSAL PROCEDURES

You can qualify your own people

192.285



PROOF OF FUSION QUALIFICATION



QUALIFICATION OF JOINING POLYETHYLENE CERTIFIES THAT PROCEDURE:

Randall D. Hand

UNV-2708B

UNV-2708SA

UNV-2708SO

UNV-4710B

UNV-4710SA

UNV-4710SO

CENTRAL

MTDRIFUSION

QUAL. NO: 14344

COMPLETED REQUIREMENTS FOR
QUALIFICATION ON GAS PIPE FOR:
PE2708/4710 RESIN PPI VALIDATED

- BUTT FUSION
- SOCKET FUSION
- SADDLE FUSION
- MECHANICAL JOINT
- ELECTROFUSION

4/7/2017

DATE

WR

ADMIN, GAS
PIPELINE
SAFETY


The fusion qualification that the PSC provides is ONLY good for UNIVERSAL PROCEDURES

If you are using different parameters for fusing-

Temperature, Heating Times, Bead Size etc,



PROOF OF FUSION QUALIFICATION

 **QUALIFICATION OF JOINING POLYETHYLENE**
CERTIFIES THAT
PROCEDURE: IUNV-2708B
IUNV-2708SO
IUNV-4710SA
ICENTRAL
IMTDTRIFUSION

Randall D. Hand
IUNV-2708SA
IUNV-4710B
IUNV-4710SO
IFRIATEC

QUAL. NO: 14344

COMPLETED REQUIREMENTS FOR
QUALIFICATION ON GAS PIPE FOR:
PE2708/4710 RESIN PPI VALIDATED

BUTT FUSION SADDLE FUSION
 SOCKET FUSION ELECTROFUSION
 MECHANICAL JOINT

4/7/2017
DATE

WRJ
ADMIN, GAS
PIPELINE
SAFETY

The fusion qualification that the PSC provides is ONLY good for UNIVERSAL PROCEDURES

If you are using different parameters for fusing-

Temperature, Heating Times, Bead Size etc,

This card is NOT valid.

If you are using parameters different than the procedures you provide us and you DO NOT have proof of qualification under those procedures.



PROOF OF FUSION QUALIFICATION



QUALIFICATION OF JOINING POLYETHYLENE CERTIFIES THAT PROCEDURE:

Randall D. Hand

UNV-2708B

UNV-2708SA

UNV-2708SO

UNV-4710B

UNV-4710SA

UNV-4710SO

CENTRAL

MTDRIFUSION

QUAL. NO: 14344

COMPLETED REQUIREMENTS FOR
QUALIFICATION ON GAS PIPE FOR:
PE2708/4710 RESIN PPI VALIDATED

- BUTT FUSION
- SOCKET FUSION
- SADDLE FUSION
- MECHANICAL JOINT
- ELECTROFUSION

4/7/2017
DATE

WRJ

ADMIN, GAS
PIPELINE
SAFETY

The fusion qualification that the PSC provides is **ONLY** good for **UNIVERSAL PROCEDURES**

If you are using different parameters for fusing-

Temperature, Heating Times, Bead Size etc,

This card is **NOT** valid.

If you are using parameters different than the procedures, you provide us and you **DO NOT** have proof of qualification under those procedures.

You may receive a violation and all of the fusions that you have done may be removed from where they were installed.





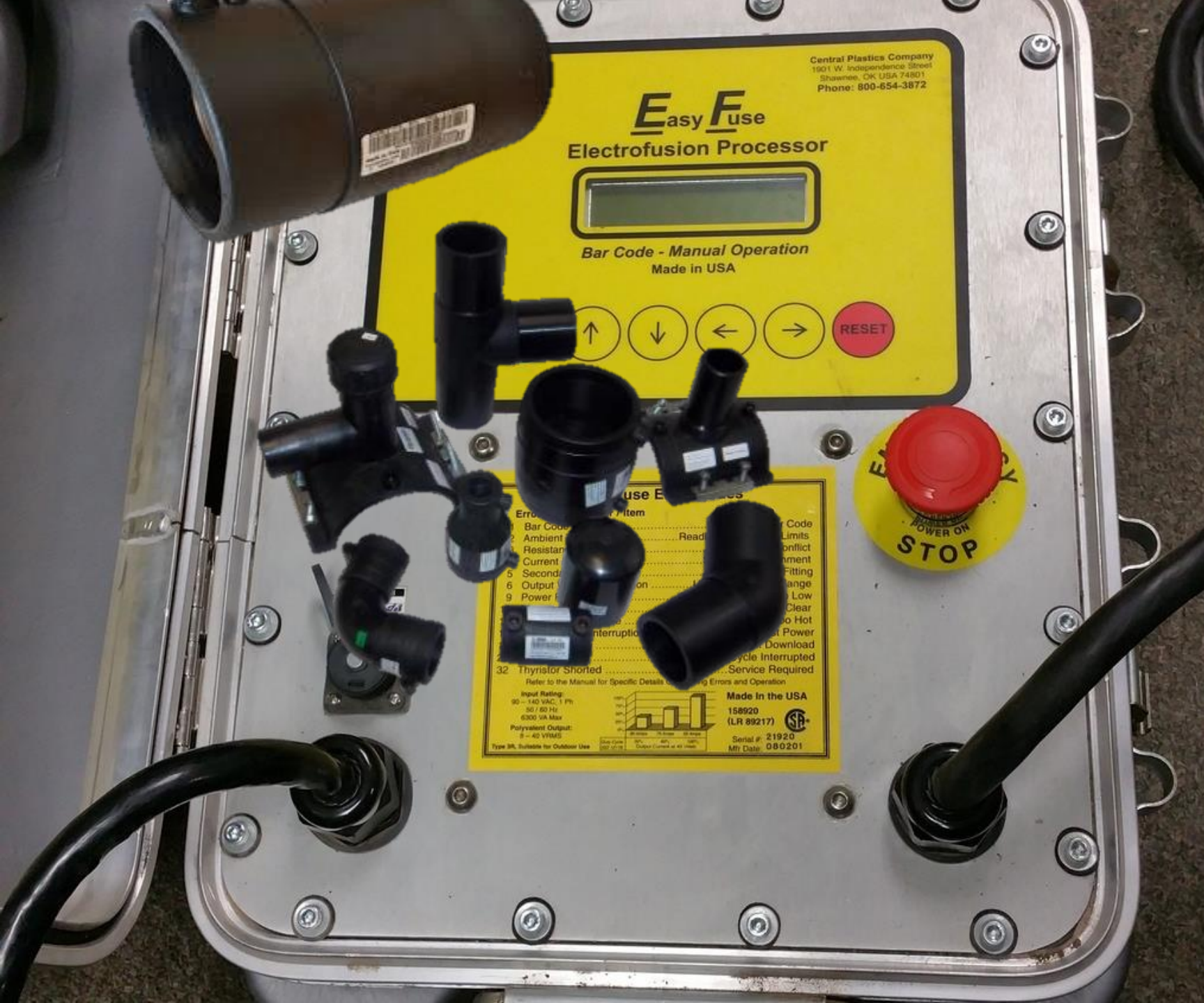
HYDRAULIC FUSION

- Hydraulic Fusion Procedures are basically the same as manual fusion procedures.
- Correct Fusion Pressures and Temperatures **MUST** be followed.
- Machines **MUST** be in proper working condition.
 1. No fluid leaks
 2. Gauges must work
 3. Proper Pipe bushings installed
 4. **SET UP PROPERLY !!!**



HEATER PLATES CAN NOT BE DAMAGED IN THE PIPE CONTACT AREA.





Central Plastics Company
1901 W. Independence Street
Shawnee, OK USA 74801
Phone: 800-654-3872

Easy Fuse Electrofusion Processor



Bar Code - Manual Operation
Made in USA



Easy Fuse Electrofusion Processor

Error Code	Item	Read	Code	Item
1	Bar Code		1	Limits
2	Ambient		2	Conflict
3	Resistor		3	Alignment
4	Current		4	Fitting
5	Second		5	Change
6	Output		6	Low
9	Power		9	Clear
				Too Hot
				Interrupted
				Power
				Download
				Cycle Interrupted
32	Thyristor Shorted			Service Required

Refer to the Manual for Specific Details on Error Codes and Operation

Input Rating:
90 - 140 VAC, 1 Ph
50 / 60 Hz
6300 VA Max

Output Rating:
1 - 40 VDC

Type III, Suitable for Outdoor Use

Made in the USA
158920
(LR 89217)

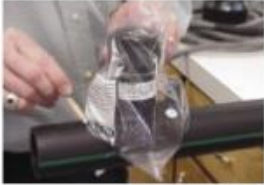
Serial #: 21920
Mfr Date: 080201

ELECTROFUSION



Electrofusion Joining Procedures for Sidewall/Saddle Fittings (for use with under-clamp on 1-1/4" - 6" fitting bases)

1.) Identify the location of the fitting to be installed on the pipe and mark the area with a non-greasy marker.



2.) Check the pipe surface for any embedded debris that may cause damage to scraping tools making sure that the outer pipe surface is clean and free of any dirt or mud that could recontaminate the scraped pipe surfaces.

3.) Scrape the area to be fused with an approved scraping tool. Make sure that the appropriate amount of material is removed approx. .007" to .0010".

Do not use abrasives, grinding wheels, or other devices that do not cleanly remove the contaminated material.

NOTE: The purpose of scraping is to remove material from the pipe surface. Simply roughing up the fusion area will not allow an acceptable bond to take place. (see "Proper Pipe Preparation" page 3)



4.) Avoid touching the scraped pipe surface or the inside of the fitting as body oils and other contaminants can affect fusion joint performance. If the surfaces become contaminated, clean thoroughly with a clean, lint free towel and a **minimum 70%** concentration of isopropyl alcohol and allow to dry before assembling. **Do not use alcohol with any additives other than water.**

CAUTION:

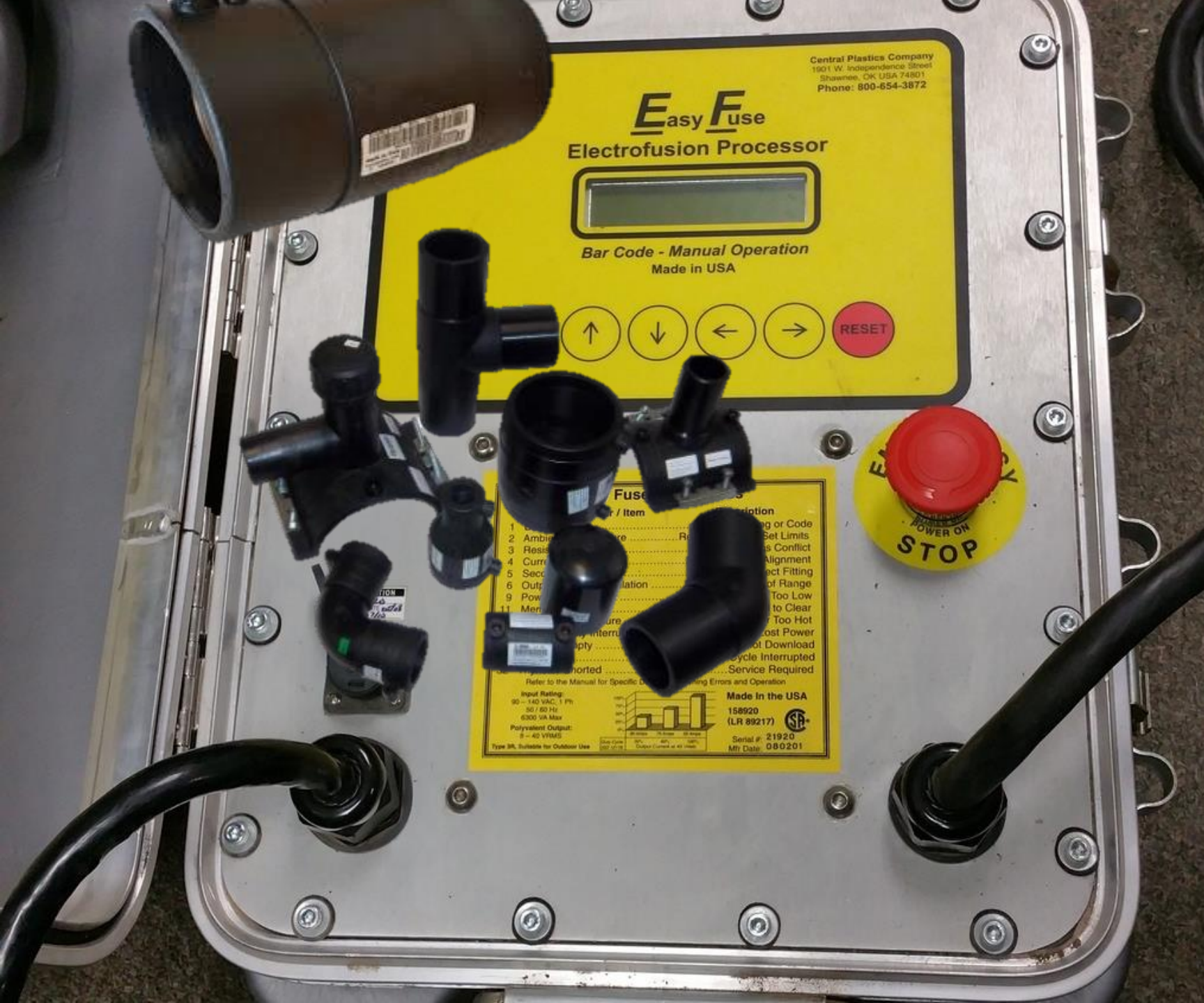
AVOID ALL POSSIBLE RECONTAMINATION OF THE PREPARED SURFACE.



ELECTROFUSION

You must follow the procedures provided by the manufacturer for their fittings.





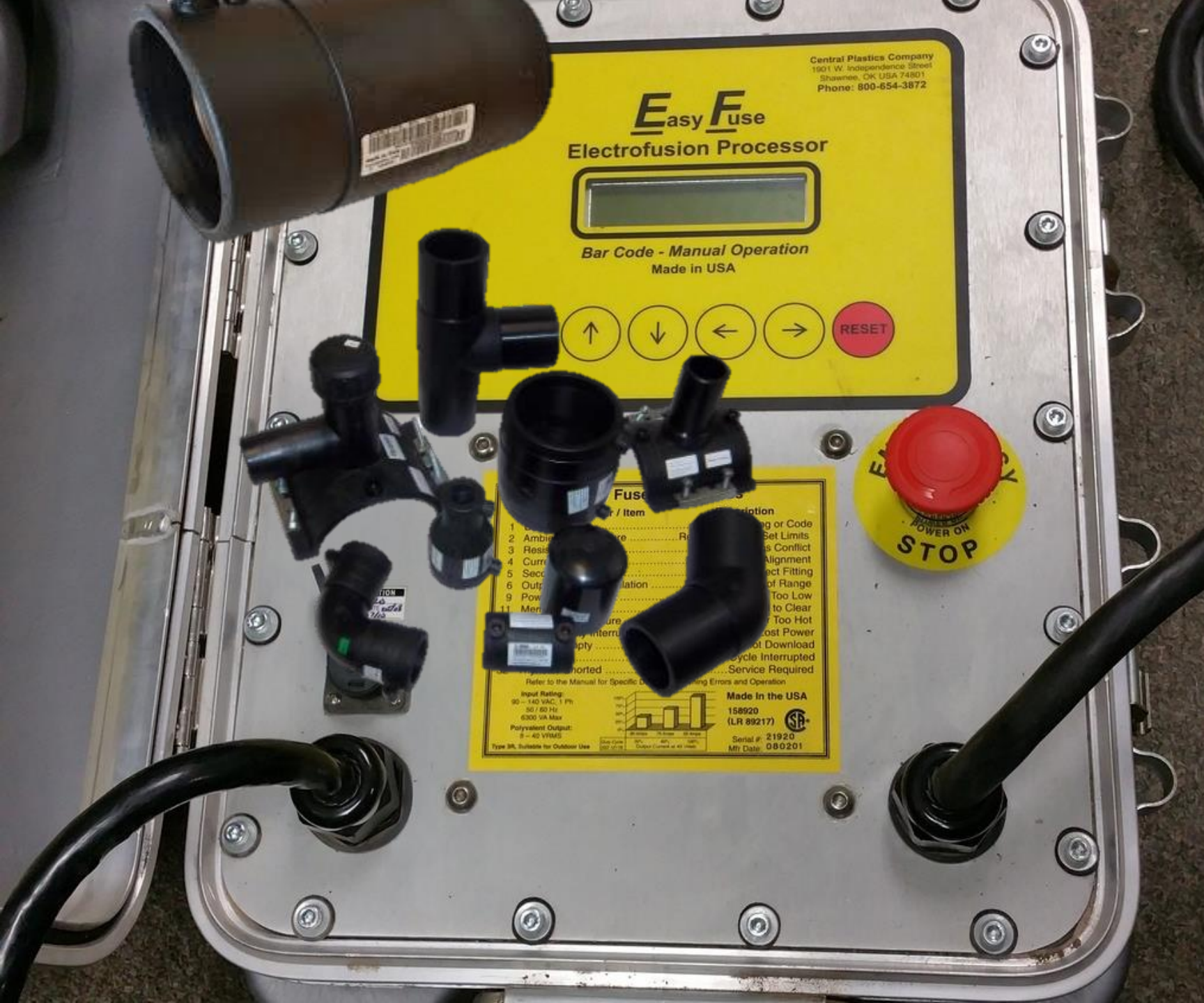
ELECTROFUSION

Pipe preparation issues.

Proper scraping methods are not being used.

Pipe and Fittings are not being properly marked, supported or clamped

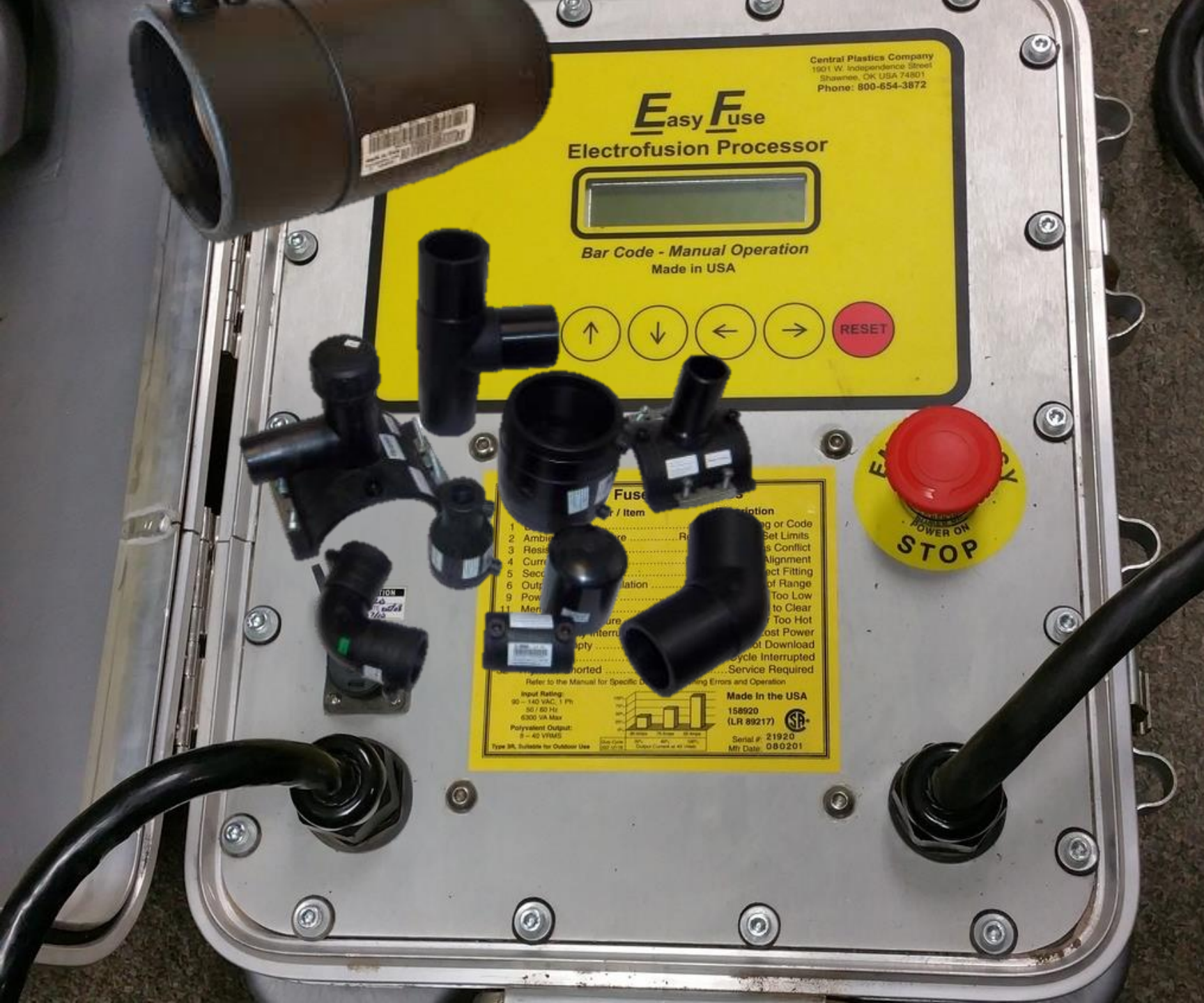




ELECTROFUSION

The majority of all Electrofusion fitting manufacturers procedures require "THE USE OF AN APPROVED SCRAPER" however the preferred method of pipe preparation is some type of "peeler" style tool.



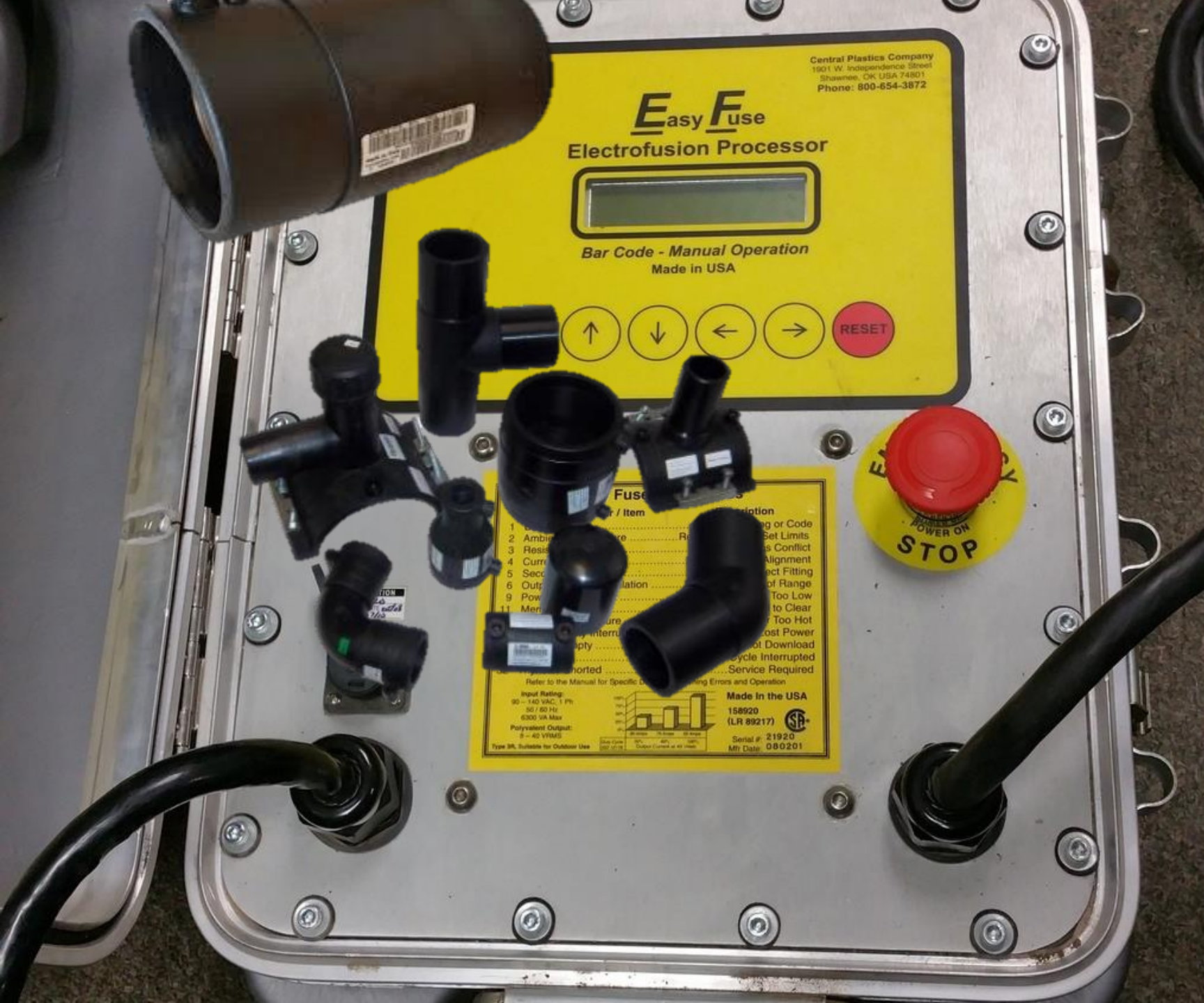


ELECTROFUSION

The majority of all Electrofusion fitting manufacturers procedures require "THE USE OF AN APPROVED PEELING DEVICE" however the preferred method of pipe preparation is some type of "peeler" style tool.

The approved style of peeler varies with the manufacturer.





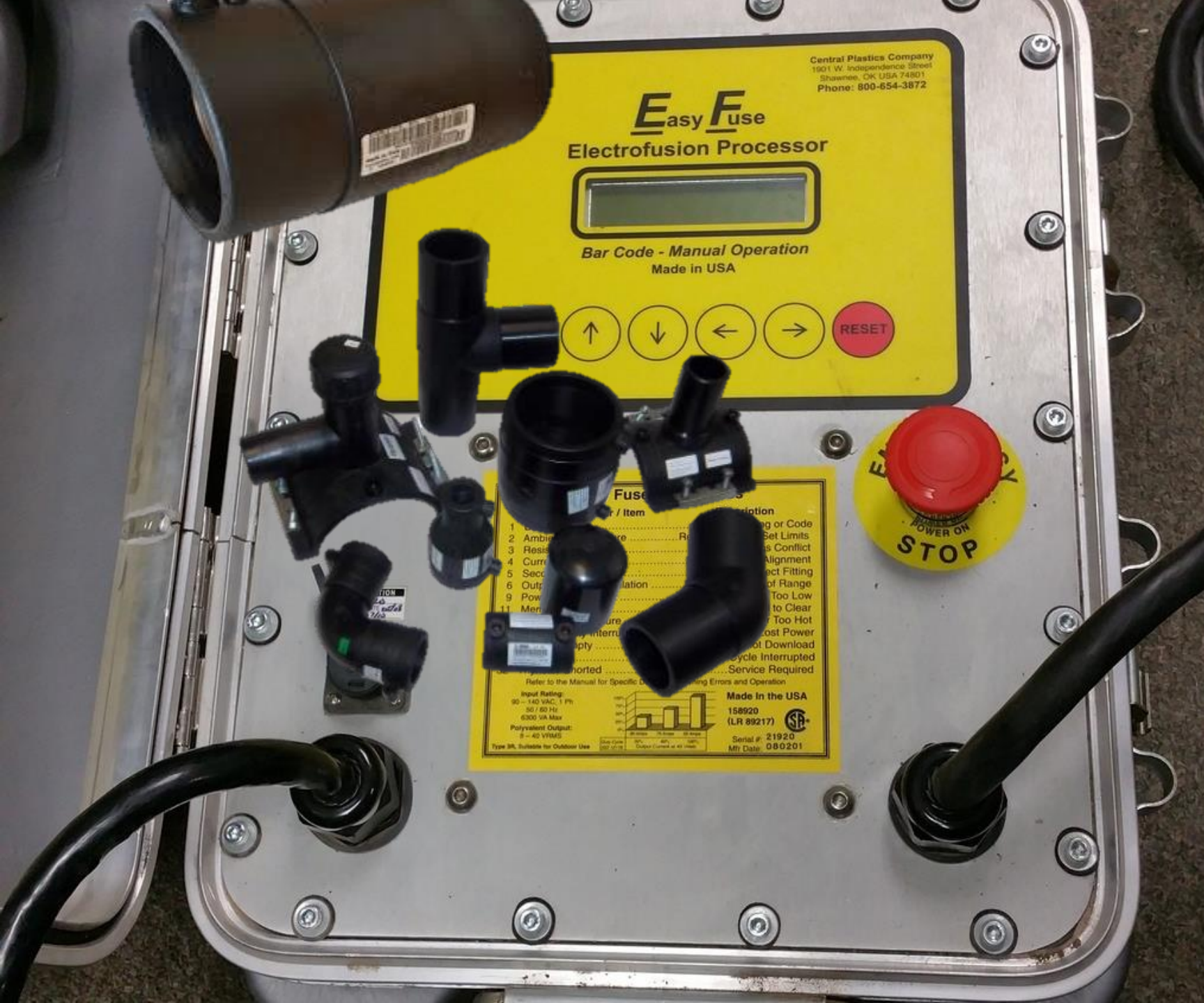
ELECTROFUSION

The majority of all Electrofusion fitting manufacturers procedures require "THE USE OF AN APPROVED SCRAPER" however the preferred method of pipe preparation is some type of "peeler" style tool.

The approved style of scraper varies with the manufacturer.

You must have a tool that is specified in your procedures.





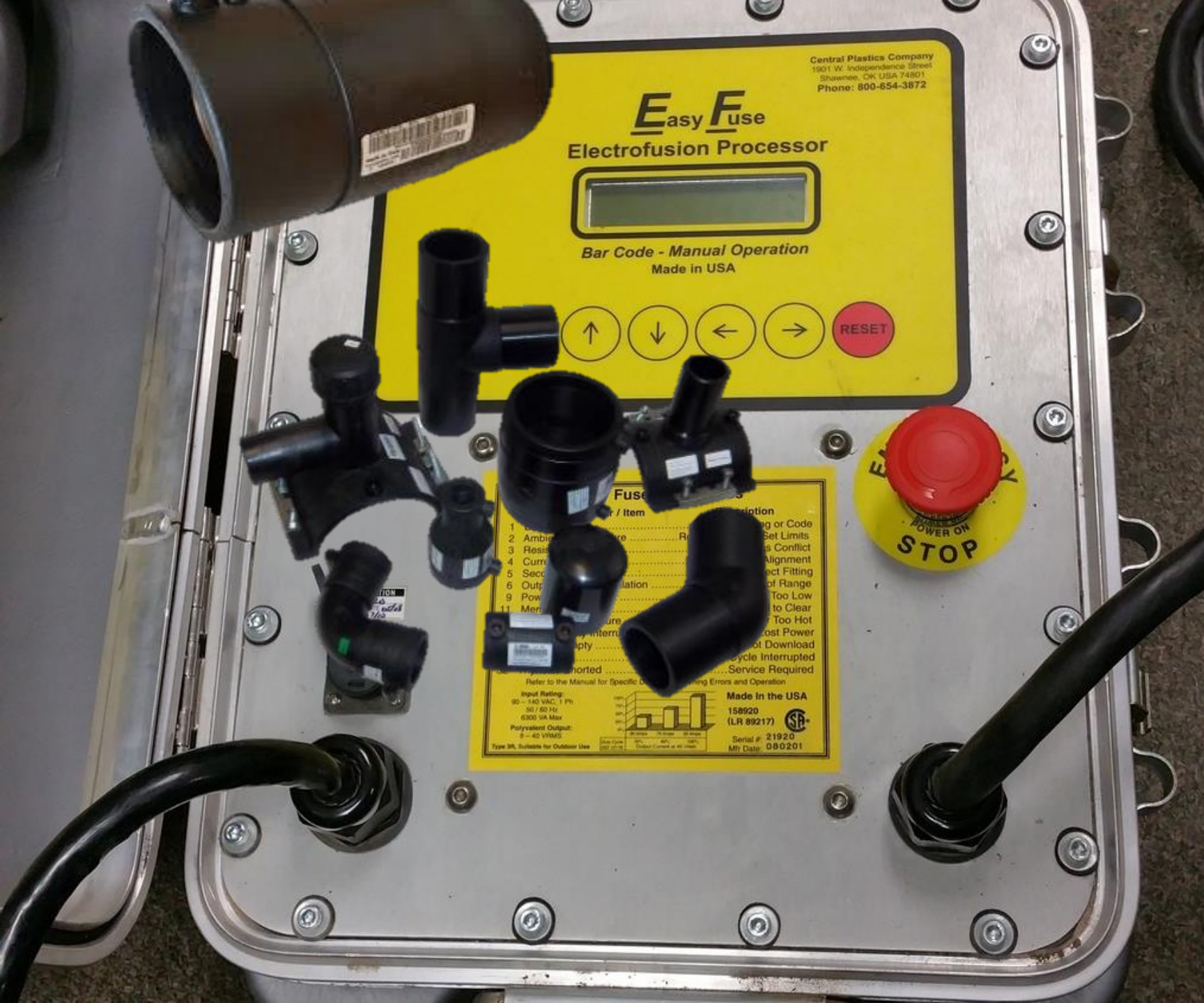
ELECTROFUSION

Pipe Scraping Tools must be capable of –

Removing the oxidation on the outer surface of the pipe.

Removing the material in a consistent smooth manner.





Central Plastics Company
1901 W. Independence Street
Shawnee, OK USA 74801
Phone: 800-654-3872

Easy Fuse Electrofusion Processor



Bar Code - Manual Operation
Made in USA



Fuse Error / Item	Description
1. Current Error	Wiring or Code
2. Ambient Temperature Error	Set Limits
3. Resistance Error	Wires Conflict
4. Current Error	Alignment
5. Secondary Error	Wiring Conflict
6. Output Error	Out of Range
9. Power Error	Too Low
11. Memory Error	Too High
12. Memory Error	Too Hot
13. Memory Error	Power Lost
14. Memory Error	Power Lost
15. Memory Error	Power Lost
16. Memory Error	Power Lost
17. Memory Error	Power Lost
18. Memory Error	Power Lost
19. Memory Error	Power Lost
20. Memory Error	Power Lost
21. Memory Error	Power Lost
22. Memory Error	Power Lost
23. Memory Error	Power Lost
24. Memory Error	Power Lost
25. Memory Error	Power Lost
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27. Memory Error	Power Lost
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40. Memory Error	Power Lost
41. Memory Error	Power Lost
42. Memory Error	Power Lost
43. Memory Error	Power Lost
44. Memory Error	Power Lost
45. Memory Error	Power Lost
46. Memory Error	Power Lost
47. Memory Error	Power Lost
48. Memory Error	Power Lost
49. Memory Error	Power Lost
50. Memory Error	Power Lost

Refer to the Manual for Specific Descriptions of Errors and Operation

Input Rating:
90 - 140 VAC, 1 Ph
50 / 60 Hz
6300 VA Max

Polystyrene Output:
1 - 40 V/MS

Type III, Suitable for Outdoor Use

Made in the USA
158920
(LR 89217)

Serial #: 21920
Mfg Date: 080201

ELECTROFUSION

Electrofusion Processors must be updated and calibrated in accordance with the manufacturer's recommendations.





ELECTROFUSION

Depth should be marked to insure that pipe/ coupling do not shift during fusion.

Clamping is not required on every size pipe but it is recommended.





ELECTROFUSION

Depth should be marked to insure that pipe/ coupling do not shift during fusion.

Clamping is not required on certain size pipe but it is recommended.





ELECTROFUSION

Depth should be marked to insure that pipe/ coupling do not shift during fusion.

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**USE PROPER
CLAMPS**



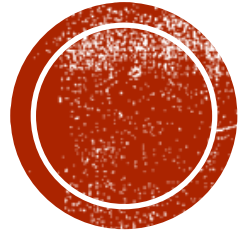
EQUIPMENT MAINTENANCE AND UPKEEP



EQUIPMENT MAINTENANCE

All equipment used in the fusion process must be in Proper Working Condition





**EQUIPMENT MUST WORK
THE WAY IT WAS
DESIGNED TO WORK**





FUSION HEATER PLATES MUST HAVE THE PLATE ON THEM.

**Can NOT use a plate without the
Teflon Plate**



**Heater MUST have the Teflon plate
on it**



Unacceptable Heater Plates



This could be considered acceptable; coating is still intact and not excessively gouged.







SIDEWALL MACHINE

Rails should be smooth and clean.

Head unit should travel freely.

Gauge must be on the machine and in **FUNCTIONING** order. (probably should at least start out on zero)

Should have the proper pipe inserts for the size pipe being used.

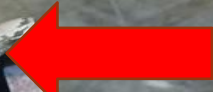


UNACCEPTABLE SIDE WALL HEATER PLATE



DANGER - NOT
EXPLOSION PROOF







***Excessive Ink residue build
up on heater plate***

BUTT FUSION CRADLE

Cradle should move freely

Rails should be straight, smooth.

Proper Pipe inserts should be installed to match the size pipe being fused.



BUTT FUSION CRADLE

Cradle should move freely

Rails should be straight, smooth.

Proper Pipe inserts should be installed to match the size pipe being fused.

Well Maintained Equipment DOES NOT look like this.





**FUSION PROCEDURE
REQUIRES THE USE OF
A PYROMETER**



ALL HEATER PLATE TEMPERATURES MUST BE VERIFIED WITH A PYROMETER OF SOME KIND, THE DIAL GAUGES ON THE HEATER ARE NOT CONSIDERED ACCURATE.....





FACTORY TEMP. GAUGES

Not accurate, **CAN NOT** be used as verification of heater plate temperature.





DIRECT CONTACT PYROMETER

Simple to use.



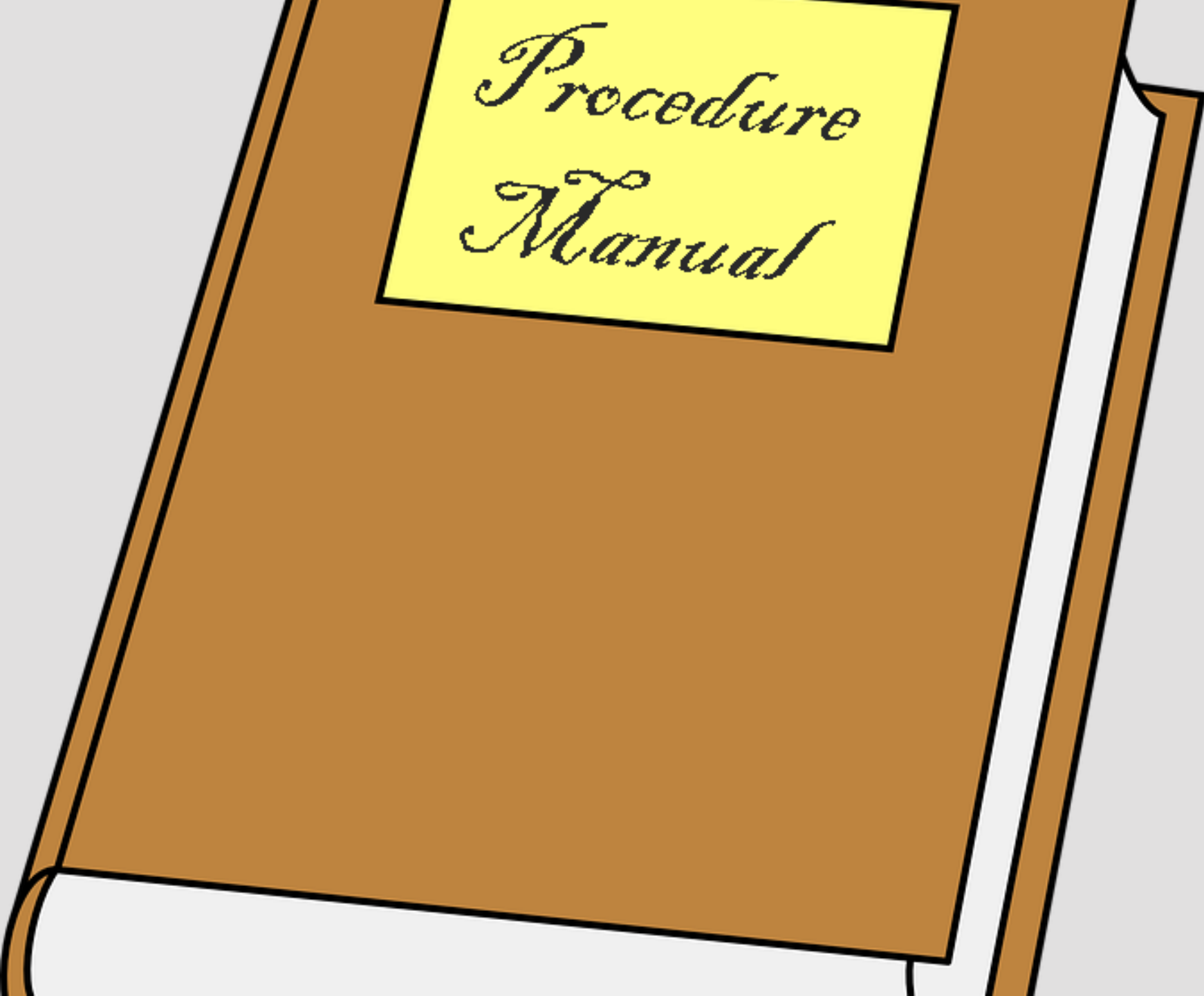


LASER PYROMETER

Must be able to demonstrate the proper +/- formula for the type of laser being used.

The point and shoot method does not necessarily give a correct/accurate number.





*Procedure
Manual*

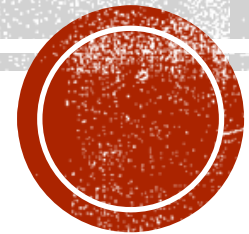
BOTTOM LINE

Become familiar with the procedures put in place by the company you are working for.

FOLLOW the procedures that have been adopted by that company.



**BRIDGE CROSSINGS,
EXPOSED CROSSINGS,
ABOVE GROUND
FACILITIES**





Pipe going through wing walls/
concrete stands/ pipe supports

Using CFR 192.479/192.481





- Can this section inside of the concrete be inspected and proven to be unaffected by corrosion ?
- Is it protected?

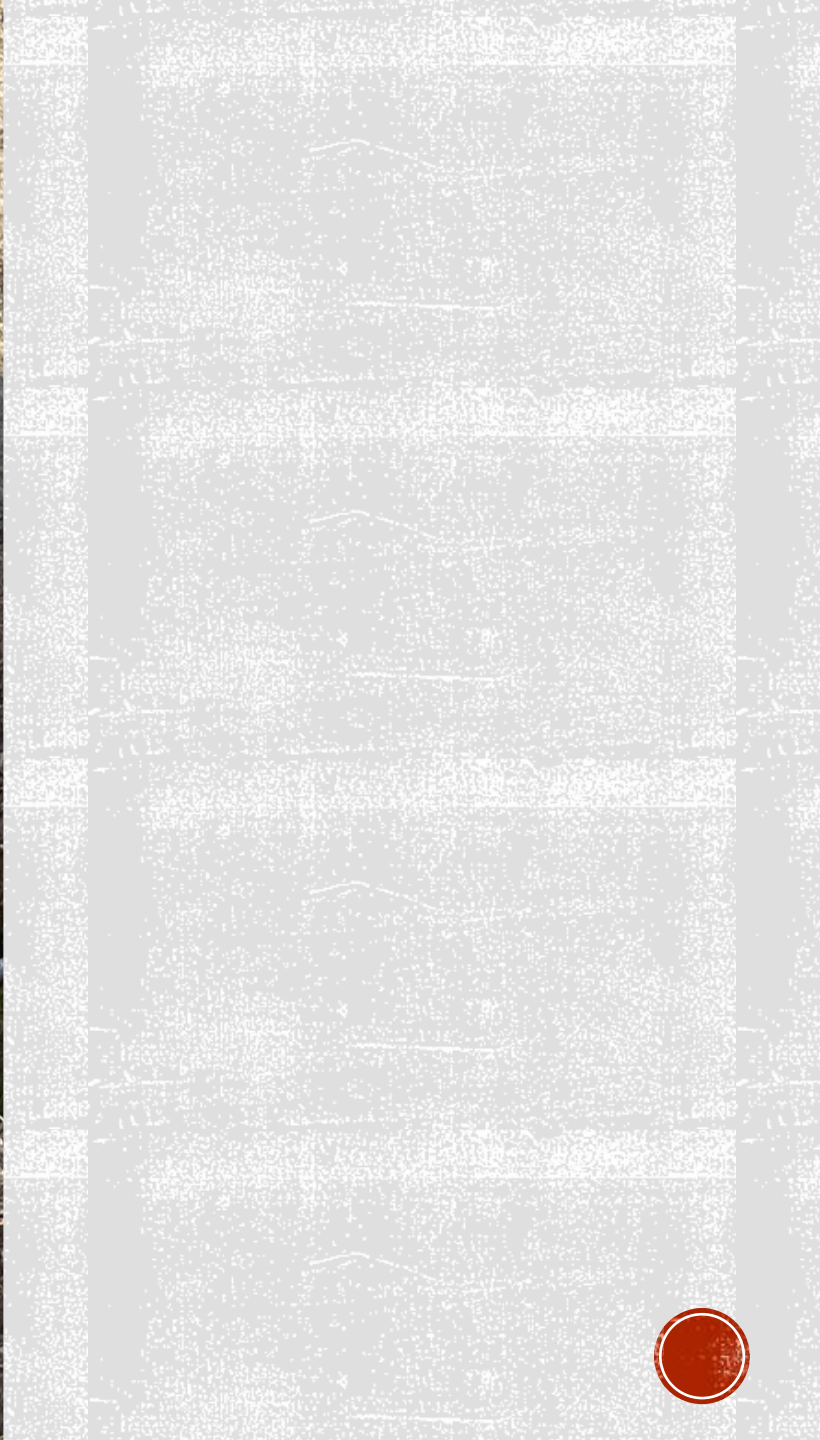


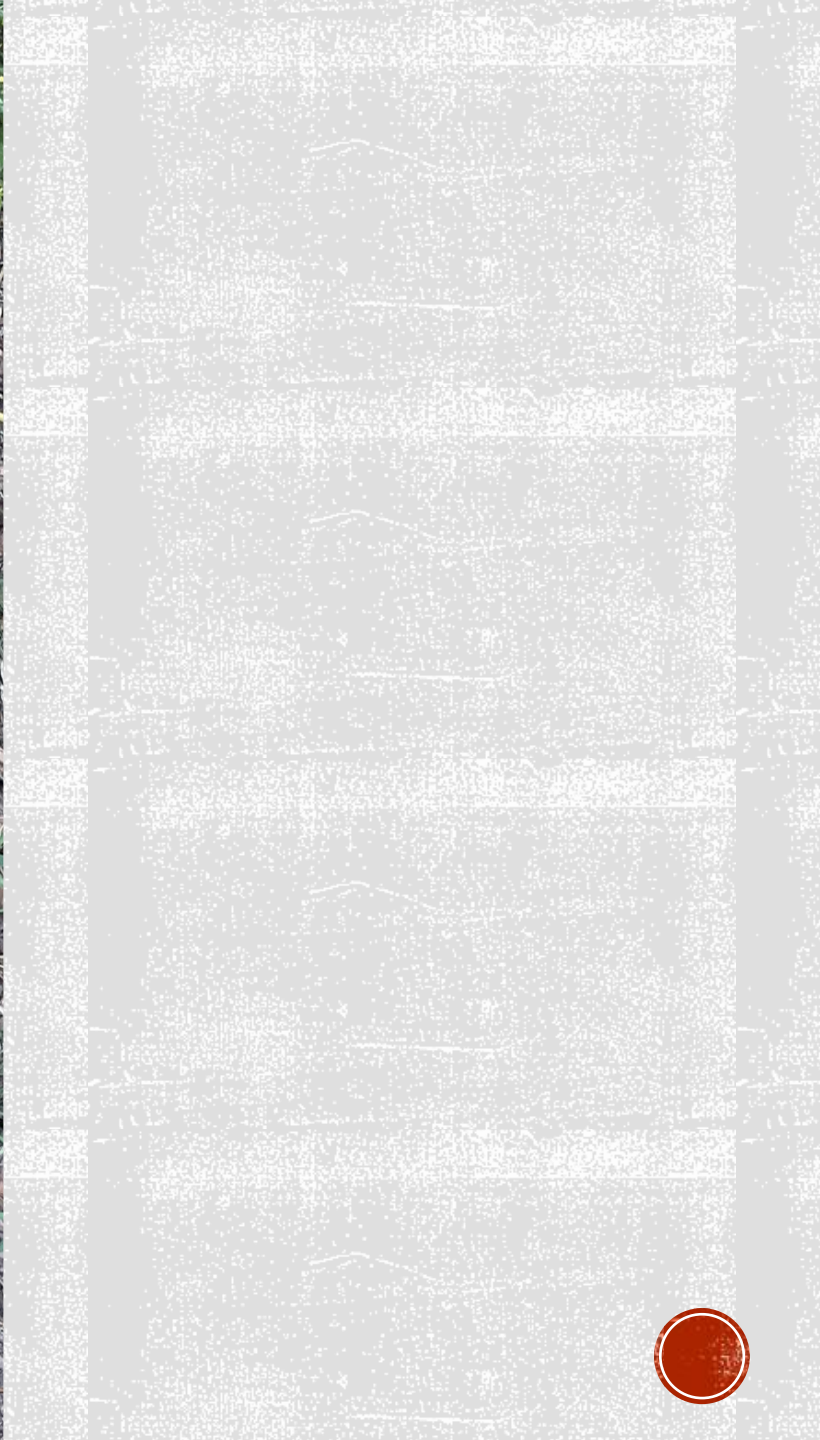


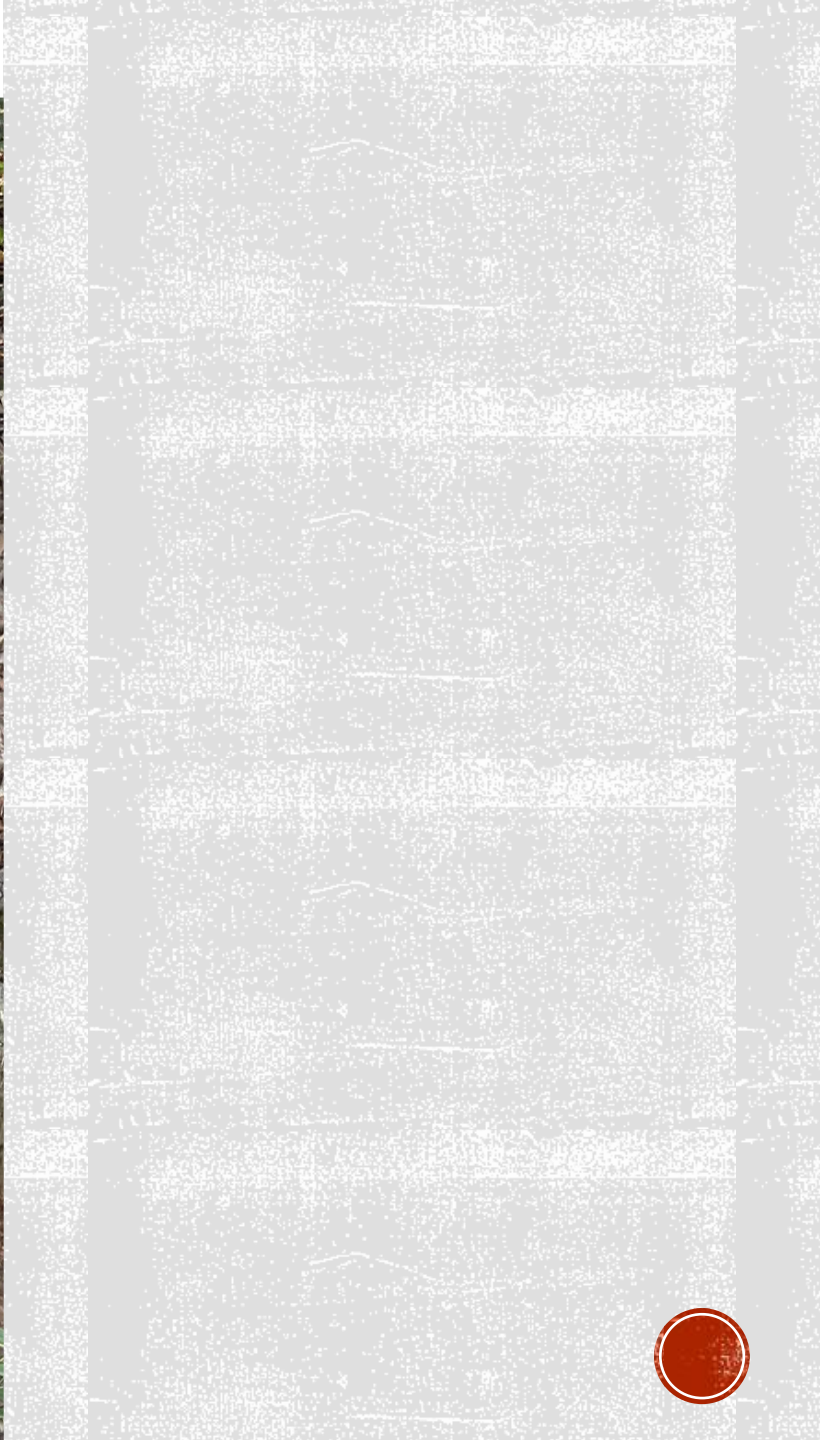
CFR 192.161-Supports and Anchors

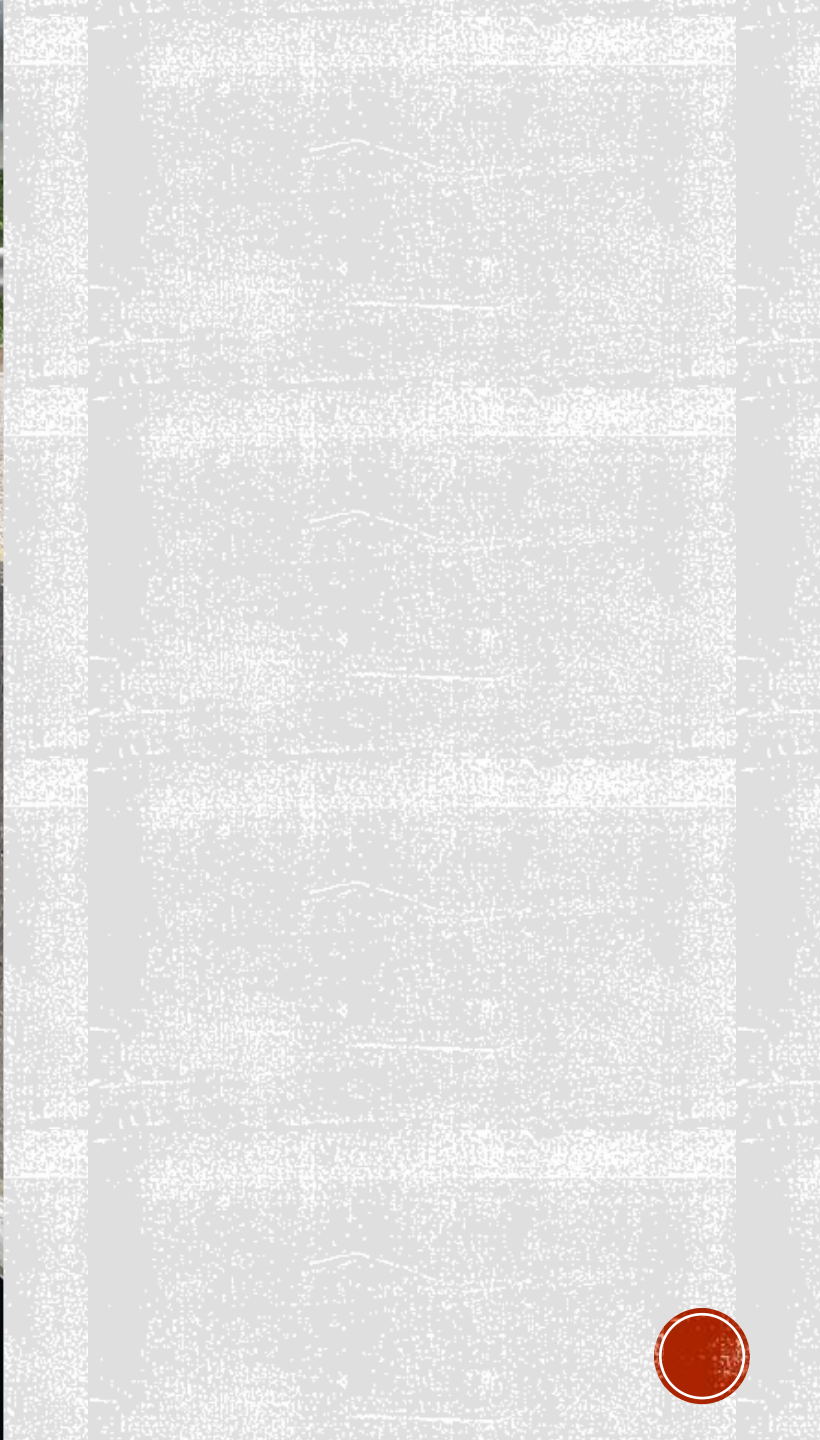




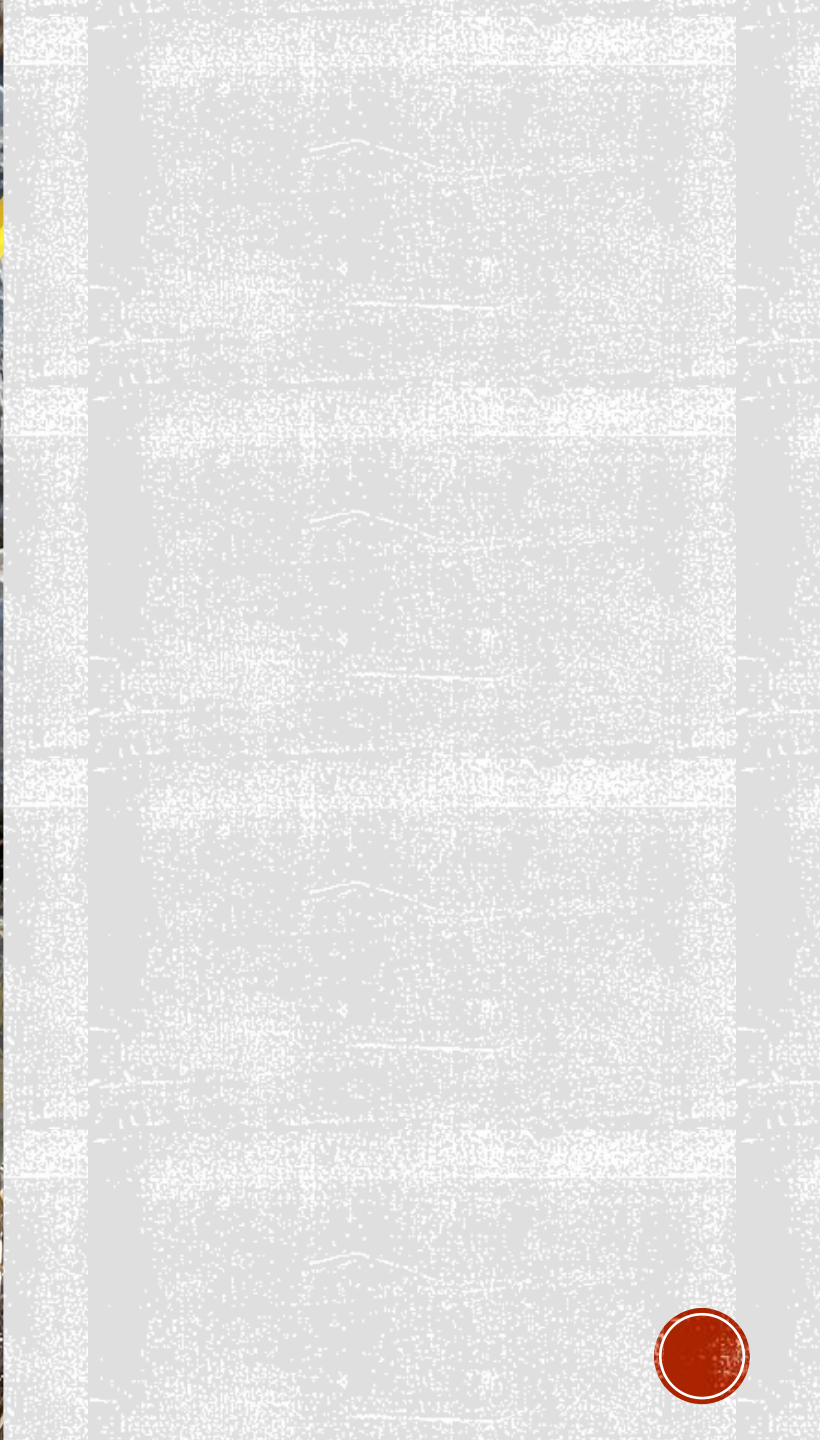


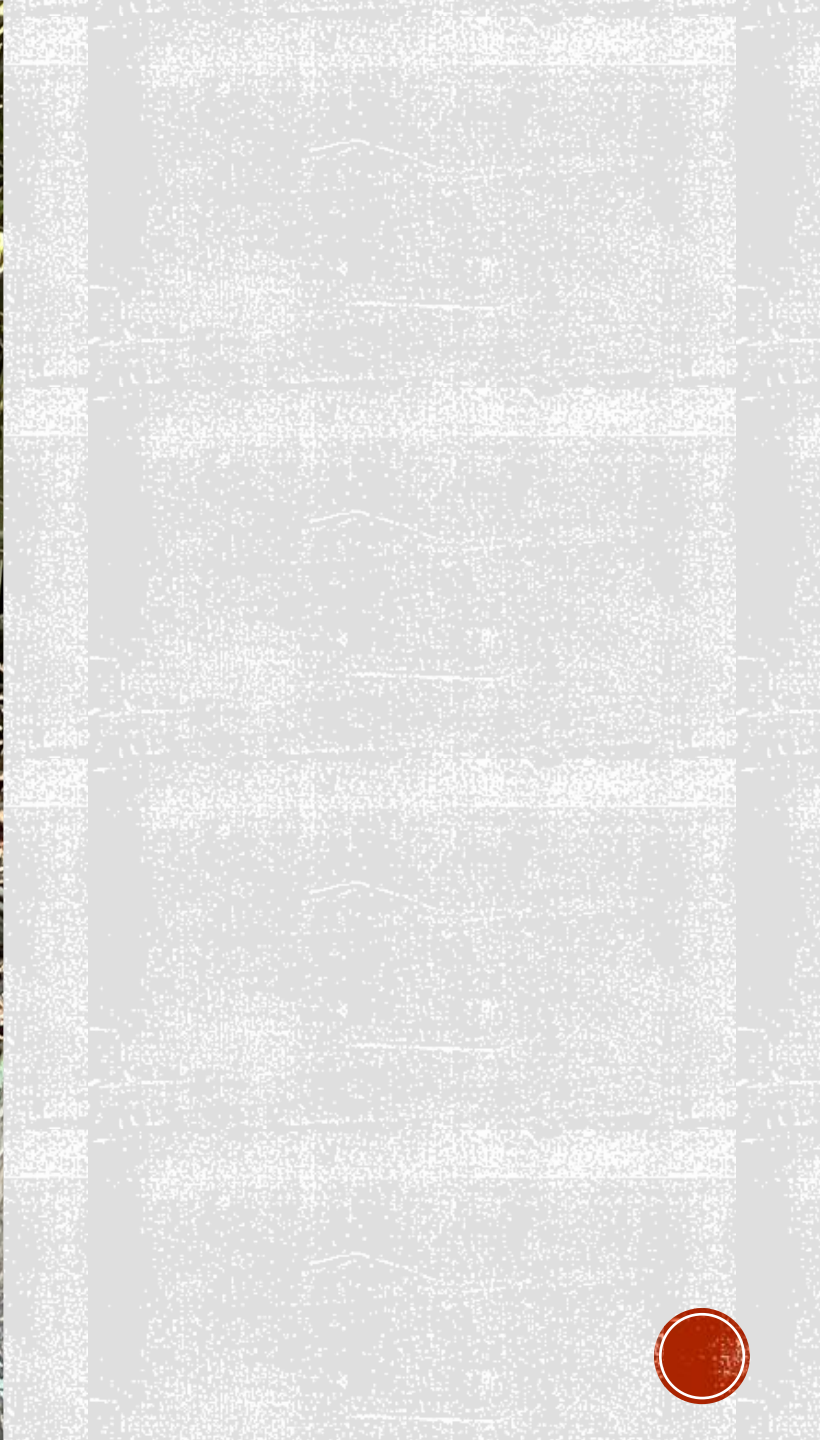


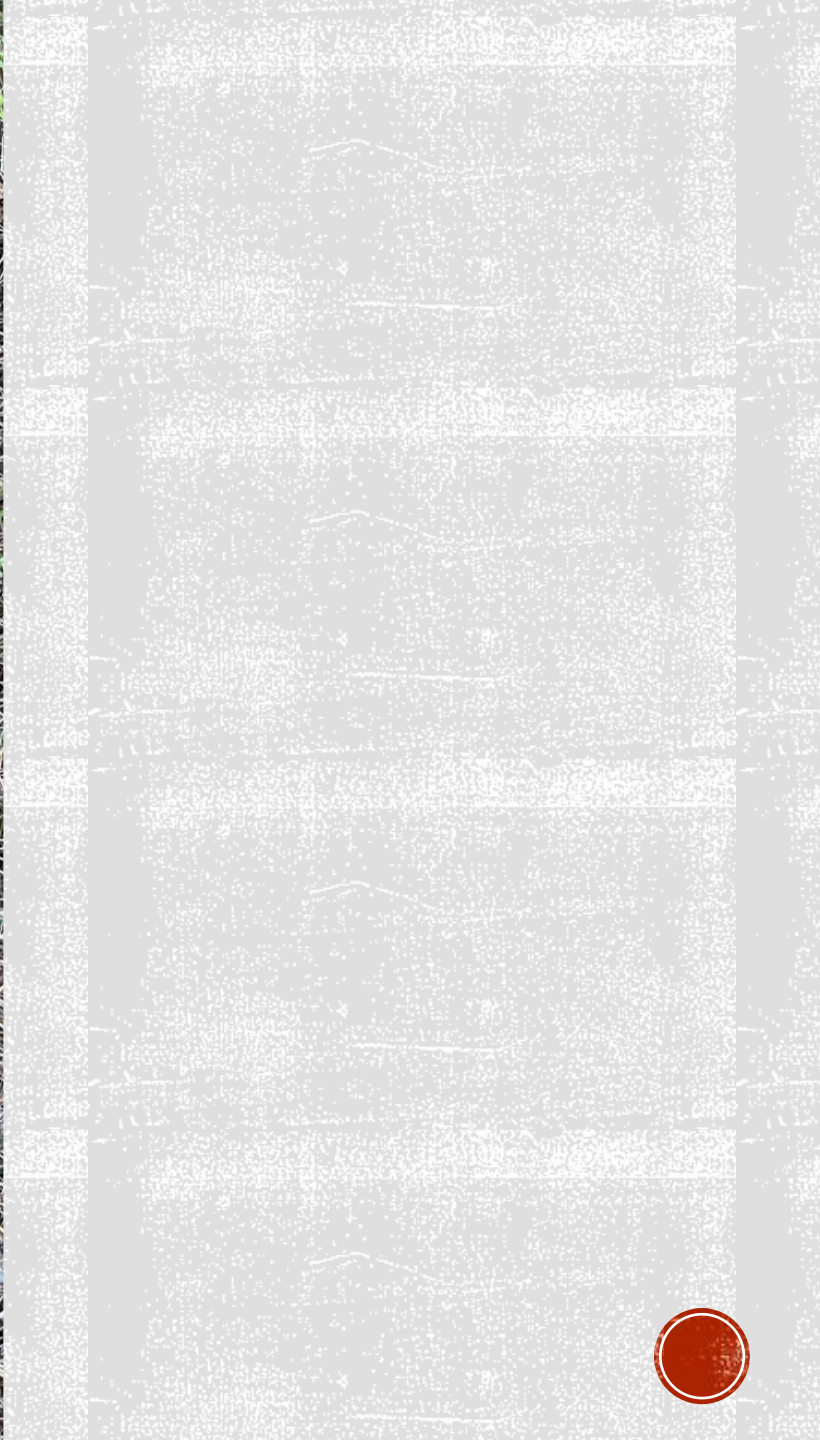






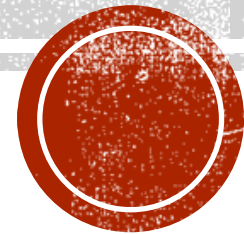






RELOCATION PROJECTS

You are required to ensure that your pipeline is relocated, moved, altered etc. in accordance to ALL applicable codes and regulations

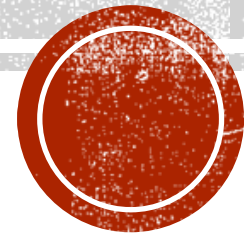


IT IS STILL YOUR PIPELINE

- You approve the contractor
- You review and approve their qualifications
- You must provide the contractor with procedures
- It is still your pipe and you are still responsible for its safe operation.



ANY QUESTIONS ?



**RANDALL D. HAND
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