

# Polyethylene Pipe Fusion, Small Diameter

## Course Outline

### **Course Description**

This 1 day course prepares the participants to work in small diameter applications from ½" CTS to 6" DIPS (16mm to 180mm) using MMI McElroy hydraulic fusion machines.

### **Course Pre-requisites**

There are no specific pre-requisites for this course. However, Grade 12 (or equivalent) math skills are an asset. Math upgrades are available –contact us.

### **Continuing Education Units (CEUs)**

0.6 CEUs

### **Course Duration**

- 1 day
- 8:30 am to 4:00 pm
- 1 hour lunch break
- morning and afternoon break (15 minutes each)

### **Course Topics and Learning Outcomes**

Upon successful completion of the course, the students will be able to:

- Introduction to Polyethylene
- Fusion Theory
  - understand the theory of fusion
    - sidewall fusion (optional)
    - socket fusion (optional)
- ASTM Standards
- Proper Fusion Techniques
  - properly fuse small diameter pipes and fittings
- Application Tips
  - obtain a minimum level of operator proficiency in order to competently operate hydraulic MMI McElroy butt fusion equipment (see “Equipment covered”)
- Equipment Design
- Troubleshooting Resources

Equipment covered:

Butt Fusion	Socket Fusion	Saddle Fusion
2LC	SOCKET TOOLING	SIDEWINDER
2CU		
Pit Bull® 14		
Pit Bull® 26		

**Delivery Method/Format**

Instructional Method	Percentage of Class Time
Hands-on/Q & A	80%
Examples/Case Study	
Presentation/Lecture	
Slides	15%
Demonstration	5%
Video/DVD	
Tutoring	

**Material/Handouts (supplied)**

- Student Binder: AH McElroy, 2017. Polyethylene Pipe Fusion, Small Diameter. Edmonton, Alberta.
- EOCP Course Completion and Evaluation Form.
  - Every student needs to complete and return this form for any CEU allocation
- Calculators are provided but students are welcome to use their own.
  - Please return

**Course Requirements**

Attendance and participation in class are required. CEUs will be allocated based on attendance and course completion; Yukon University records will show a pass or fail result. If the participant doesn't attend the class, Yukon University records will show a "no show" result and no CEUs will be allocated.

**Evaluation**

There will be a quantifiable evaluation at the end of this course with a passing mark of 70%. If anyone fails this evaluation, arrangements can be made for a re-assessment. Please note that this evaluation is for self-assessment purpose only.

**Academic and Student Conduct**

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/Admissions & Registrations web page.

**Plagiarism**

Plagiarism is a serious academic offence. Plagiarism occurs when students present the words of someone else as their own. Plagiarism can be the deliberate use of a whole piece of another person’s writing, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material. Whenever the words, research or ideas of others are directly quoted or paraphrased, they must be documented according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Resubmitting a paper which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the University.

**Students with Disabilities or Chronic Conditions**

Reasonable accommodations are available for **all** students, including Community Campuses (Zoom meeting option for community campus students). Yukon University is committed to creating an accessible learning environment open to all students by ensuring equal access to academic facilities, learning environments and educational programs. We know every student is unique and has different needs. Accessibility Services works collaboratively with students with disabilities to provide a supportive learning environment that enhances academic and personal development. Students are responsible for self-identifying and requesting academic accommodations from Accessibility Services each new semester. All services are confidential. Contact Accessibility Services at (867) 668-8780 or [access@yukonu.ca](mailto:access@yukonu.ca).

**Class Outline**

<b>Topic</b>	<b>Time Allocation</b>
Principles of Heat Fusion	.5
Fusion Presentation and Demonstration — Butt Fusion, Socket Fusion, Saddle fusion	1
Hands-On Training	4
Written and Practical Testing	1