



Yukon Water & Wastewater Operator Program

## Polyethylene Pipe Fusion, Mid-Range Diameter

### Course Outline

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**INSTRUCTOR:** Ryan Ethier  
**DATE:** November 01, 2017 (Wednesday)  
**TIME:** 8:30 am – 4:00 pm

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#### **Course Description**

This 1 day course prepares the participants to work in mid-range diameter applications from 2" IPS to 20" DIPS (63mm to 500mm) 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 is 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
- ASTM Standards
- Proper Fusion Techniques
  - properly hydraulically fuse mid-range 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”)
- use the DataLogger® to quickly analyze and check each fusion joint made (optional)
- Equipment Design & General Maintenance
- Troubleshooting Resources

Equipment covered:

Rolling 28	Rolling 250
Rolling 412	Rolling 618
TracStar® 28	TracStar® 250
TracStar® 412	TracStar® 618
TracStar® 500	
Data Logger® (optional)	

### **Delivery Method/Format**

<b>Instructional Method</b>	<b>Percentage of Class Time</b>
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, Mid-Range 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 are required. CEUs will be allocated based on attendance and course completion. If the participant doesn't attend the course, records will show a “no show” result.



### **Evaluation**

There will be a final exam in this course with a passing mark of 70%. Yukon College records will only show a pass or fail result. If anyone fails this exam, arrangements can be made for a re-write.

### **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 College.

### **Students with Disabilities or Chronic Conditions**

Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

### **Class Outline**

<b>Topic</b>	<b>Time Allocation</b>
Principles of Heat Fusion	.5
Fusion Presentation — No. 28 and No.412	2
Fusion Presentation — No.618 and T500	2
DataLogger® Presentation (optional)	1
Hands-On Training	3
Written and Practical Testing	1