
NEWSLETTER | AXPROGROUP.COM

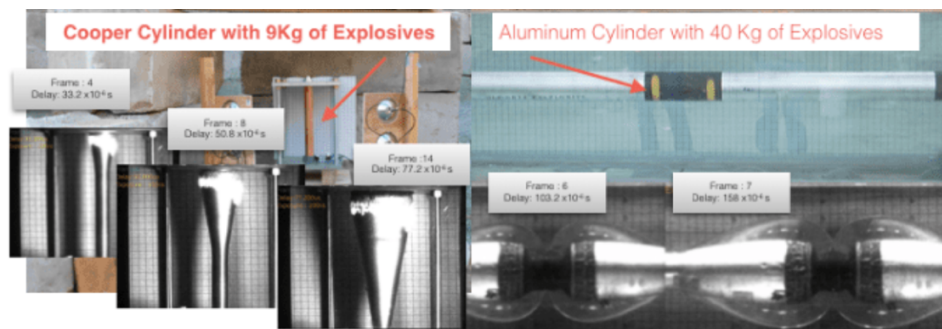
Conferences, Seminars & Publications

AXPROGROUP.COM attended the 46th annual International Society of Explosives Engineers (ISEE) Conference on explosives and blasting techniques this past January in Denver, Colorado. There we met with former students and collaborators and continued to establish industry partners for explosives research and training.

AXPROGROUP.COM will also be attending the 45th annual International Pyrotechnics Society (IPS) Seminar for the science and technology of energetic materials from July 26-30 in Colorado Springs, Colorado. During this Seminar we will be publishing and presenting a paper related to explosive engineering. We will also be participating in the poster session to outline our unique research and training capabilities. We hope to see you there!

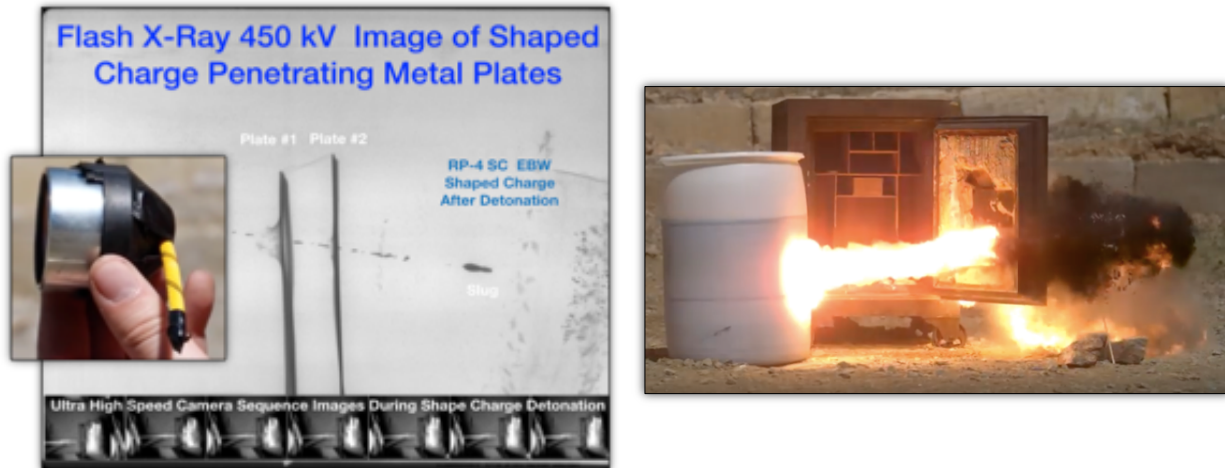
Short Courses & Trainings

AXPROGROUP.COM is excited to announce that our Explosives Academy has gone international! Our popular **Ultra-High-Speed Framing Imaging for Research & Experimentation Short Course** will be offered on October 20-23, 2020 in Golden, CO, USA in on March 23-26, 2021 in Pitstone, England. We are also working to expand this course to Madrid, Spain with the help of Dr. José Sanchidrián from the Universidad Politécnica de Madrid, Madrid (UPM). These short courses are taught in conjunction with Mr. Frank Kosel from Specialise Imaging. Specialise Imaging corporation is a worldwide leader in ultra high-speed digital imaging systems, and their SIM cameras have continually been on the leading edge of ultra high-speed imaging technology. During this course, students work on specific technical problems of ultra high-speed imagery and camera setups including the principles of the Schlieren method and shadow graph technique for detonation and explosive applications. To learn more about this course or to register, please click [here](#).



Ultra-High-Speed Framing Imaging methods and examples

AXPROGROUP.COM and Dr. Petr are once again offering the **High-Speed Impacts for Explosives and Ballistics Applications** class in partnership with Missouri University of Science and Technology (MS&T). This online exclusive class will be offered in Summer 2020. This course allows graduate students to gain practical knowledge of explosives applications and high-speed imaging techniques.



High-speed imaging of a shape charge penetrating meal plates (left) and the door of a safe (right)

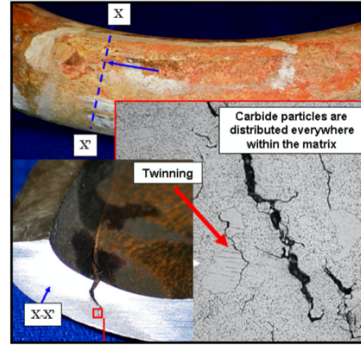
AXPROGROUP.COM is offering a new **Industrial Explosives Cleaning & Deslagging for Boilers Short Course** on August 18-21, 2020 in Golden, Colorado. This course is in collaboration with the Colorado Department of Labor and Employment and is designed to maximize safety, dependability, and efficiency when using explosive cleaning and deslagging methods. This will help to extend boiler life, improve boiler efficiency, reduce energy costs, and establish a culture of safe work practices. For more information about this course, please click [here](#).



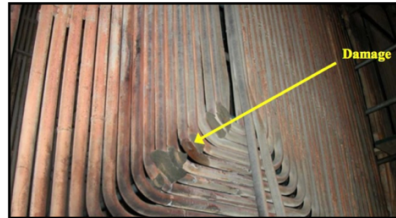
Increase Boiler Efficiency



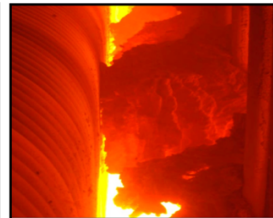
Improve Safety



Extend Boiler Life



Improve Boiler Inspection



Successful Deslagging

Industrial Explosives Cleaning & Deslagging for Boilers Short Course goals

AXPROGROUP.COM will be teaching our new **Washington State Avalanche Mitigation Short Course** in September, 2020 (exact date TBD). This is a 3-day training course on avalanche mitigation techniques, regulations, and safety and is being offered in collaboration with the Washington State’s Department of Labor and Industry and the Washington State Department of Transportation (WADOT). Course participants will learn about the wide variety of methods used to mitigate the dangers of snow avalanches including when to use each method, benefits and drawbacks, and science behind each method. Topics discussed will include hand charge delivery, case charges, helicopter charges, compressed gas (propellant and nitrogen gas), remote control systems (solid and gas explosives), cables, trams, wires, and much more.



State inspector Scott Narreau demonstrating proper avalanche hand charge use

AXPROGROUP.COM is proud to have held another successful **Practical Explosives Training School (PETS)** 16-hour general explosives course this in February 24-25, 2020. Dr. Vilem Petr has been teaching this course for over 10 years. This course is taught in conjunction with the ATF and the Colorado Department of Labor and Employment Office of Public Safety and we would like to thank ATF representatives from the Denver Office Nathan Johnson as well as Colorado State Explosives Program representatives Scott Narreau, Candace Garza, and David Knight for their support and guest lectures during the course. Industry members from companies and groups including Sierra Nevada Corporation, Rocky Mountain Scientific Laboratory, Harrison Western Construction, Moffet Limestone Quarry, and many more attended our course to update their knowledge on the latest explosive practices and regulations and to renew their Type 1 Blasters License with the State of Colorado. We are looking forward to teaching this class again in November 16-17, 2020. For registration, please [visit our website](#).

AXPROGROUP.COM will additionally be offering our yearly, in-house **Henderson Mine Avalanche Mitigation Refresher Course** in Fall/Winter 2020. This is an 8-hour refresher course that gives the Henderson Mine avalanche blasting team up-to-date information on mitigation methods, procedures, and safety. We would again like to thank our guest speakers from the ATF and Colorado State who provided regulatory information during this course. This regulatory information included information regarding the recent ATF change that now requires all unexploded avalanche mitigation charges to be reported as lost and stolen within 24 hours.

AXPROGROUP.COM is looking forward to offering our yearly **National Forest and Park Services Specialized Practical Training** in 2020 (date TBD). During these trainings Forest Service employees are taught about the various explosive applications for park services, including tree removal as shown below.



National Forest and Park Services explosive tree removal exercise

AXPROGROUP.COM is in the process of developing a specialized, in-house **Holston Army Ammunition Plant Short Course** for 2020. This will be a 4-day training course on topics including instrumentation, testing methods, explosive properties and parameters, and safety.



AXPROGROUP.COM is also reinstating our 3 ½ day **Explosive Science & Engineering Short Course** on October 19-22, 2021 in Golden, Colorado. This is a comprehensive short course on the principles and parameters of explosives science and engineering and is a carefully structured continuing education program for professionals in fields relating to energetic (explosive) materials. Both fundamental theory and practical aspects will be discussed. Topics will include detonation phenomena, explosive performance, chemical makeup, shock wave physics, numerical modeling, instrumentation, application, effects of dynamic load, and more. All topics will be presented by internationally renowned experts. This short course is an excellent opportunity to help you to stay up-to-date on current developments in the growing field of energetic/explosive materials, science, and engineering and to network with other explosives professionals and experts. For more information about this course, please click [here](#).



Participants of the first Explosive Science & Engineering Short Course in 2002

For more information about all our upcoming classes or to register for a course, please visit AXPROGROUP.COM. We are also happy to develop new specialized trainings specific to your business. To learn more, please contact Dr. Vilem Petr at vpetr@icloud.com.

Thank You,

AXPRO Group