

## 2022 CoalProtec Draws Over 500 Attendees



Mel Laurita



Joe Craft



Steve Schafrik



Joel Franklin

The Coal Preparation Society of America (CPSA) brought back CoalProTec (Coal Processing and Technology Conference and Exhibition) to a new venue, the Central Bank Center adjacent to the Rupp Arena, Lexington, KY on April 25-27, 2022. The event drew close to 500 and there were 67 exhibitors displaying their products and services.

“After a four-year hiatus due to Covid, CoalProTec was back in Lexington. We received a lot of very positive comments and by all accounts it was an overwhelming success,” said Mel Laurita, Executive Director CPSA. “And there will be ‘More in 24’ with the next CoalProTec scheduled April 29-May 1, 2024.”

The conference was a joint one with the Society of Mining Engineers, Central Appalachian Section (SME/CAS) with parallel technical sessions. There were three days of workshops and technical sessions and two days of technical exhibits in 33,000 sq. ft. of space.

Day 1 featured two workshops comprising Pumps 101 and Coal Prep 101. On Day 2, the conference began with a Keynote Address by Joseph W. Craft III, Chairman, President and CEO, Alliance Resource Partners (**see page 3**). After a tour of the exhibits, lunch was served with the annual members meeting where attendees learnt about the new programs and training opportunities that CPSA would be offering.

In the afternoon, both SME/CAS and CPSA technical sessions took place. Sponsored by Conn-Weld Industries, the Members Night Out took place at the Buffalo Distillery in the newly renovated Giants Hall featuring distillery tours, bourbon tasting, hors d’oeuvres, and dinner. Very funny comedian, Byron Trimble, closed out the night.

On Day 3, there were morning and afternoon technical sessions with the lunch program. The presenters in the technical sessions discussed advances in coal preparation, slurry impoundments, rare-earth elements, mine automation, as well as new technologies in mining and processing. A number of particularly interesting topics included the following:

**Autonomous Roof Bolter Operations Using Robotic Operations** by Steve Schafrik, PhD, PE. This presentation described the handling of drill steels, roof bolts, etc. performed by a robotic arm. The robot’s motions are timed with automated control of the drill’s hydraulic system. The operation is not totally autonomous and relies on the operator as a supervisor to maintain the consumables. This approach allows the operator to take control and to still operate the machine.

**Underground Shuttle Car Automation** by Z. Agioutantis, S. Schafric, S. Sottile, and V. Androulakis, University of Kentucky. Currently shuttle car operators are exposed to numerous hazards such as fatigue related incidents and poor visibility conditions, soft tissue injuries, noise and dust. By automating the shuttle car, the operator can be removed to the safer location of a control room. The challenges in autonomous underground tramming operations include a GPS-denied environment, poor communications and low visibility.

The presentation focused on the development of a 1:6 scale shuttle car equipped with an array of sensors for range measurement, inertial measurement as well as four 2D LiDAR scanners. The lab-scale prototype features a data management and visualization system, a navigation system which incorporates a path planning module and a real-



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time decision-making module, plus a real-time mapping system. Simulations in a mock mine section have been conducted for accessing the reliability of the prototype to navigate around underground pillars.

**Automated Shuttle Car Docking** by Joseph Sottile, PhD, University of Kentucky. This presentation covered the use of computer vision technology to identify objects and people in the environment to then use that information to plan a travel path to a goal location. The University of Kentucky Mining Engineering with SRI Inc. are using 3D vision cameras mounted on the shuttle car in the 6 to 1 scale to identify the discharge conveyor of the continuous miner as well as obstacles to and around the conveyor, including people. Then a path and set of commands for the shuttle car were calculated and executed. The presentation discussed the pipeline from the vision system to the command system as the project is expanded to full scale.

The Sponsors for the event were: Elgin Separation Solutions, FLSmidth, and Conn Weld. The Media Sponsors were: Coal Age, CoalZoom.com, Mining People and World Coal.

CPSA continues to work to promote the knowledge of coal preparation and supports its members by providing information on educational and instructional materials through its website and in the CoalProTec Journal. CPSA also sponsors workshops, technical programs, and short courses to aid in making operations more efficient, productive and safer.

The CPSA Executive Director is Mel Laurita and the Officers are: Joel Franklin, President; Jeff Walkup, Vice President (and incoming President); Barb Arnold, Secretary & IOC Rep; and Larry Watters, Treasurer. The President of SME/CAS is Steve Schafric, PhD, PE. For more information on CPSA, please visit [www.coalprepsociety.net](http://www.coalprepsociety.net).



## **America Needs Us, says Joe Craft, Chairman, President and CEO, Alliance Resource Partners**

“Don’t listen to the noise! America needs us! Our customers need us,” said Joseph W. Craft III, Chairman, President and CEO, Alliance Resource Partners, L.P. in addressing the Keynote Session of COAL ProTec, presented by the Coal Preparation Society of America, April 25-27, 2022 at the Central Bank Center, Lexington, KY.

Craft stressed the importance of America having relationships with countries around the world, particularly in light of the situation with the Russian War in Ukraine. It’s amazing how much these countries rely on America and look to it for leadership. He praised President Zelenskyy for his strength and the brave Ukrainian people, saying that he would like some Ukrainians to come and work for him.

Important questions are: What does it all mean for the embargo on Russian gas and coal? Will our Nation recognize the value of coal generation and coal capacity? The CCR regulations for coal generating plants due to be introduced in 2023 certainly need to be extended.

Just since the end of January, international coal prices have doubled with domestic coal prices increasing 50% and Craft doesn’t see that changing. With companies leaving Russia, billions of dollars in value has left Russia. All this disruption has caused a very real energy issue in the world economy. There is a need for our political leaders, just like the courage shown by the EU leaders, to put a pause on policies that threaten low cost energy that keeps our lights on and our factories open. Capital is hard to get and the banks don’t know what to do.

“We’re going to be here in 2040,” proclaimed Craft. “We’re running into a coal shortage and I’m hopeful this will be a wake-up call. I’m hopeful you’ll get the respect you deserve and our abundant, reliable coal will bring freedom to the world. Thank you all for being patriots,” he said. “We need you more than ever. Keep the faith, stay strong, don’t listen to the noise! Stay productive and God Bless!”

A question from the audience was raised regarding the Net-Negative Baseload Power Program, which is the brain-child of former Assistant Secretary of Energy at DOE, Steve Winberg. This innovation involves the co-firing of a nominal 80% coal and 20% biomass with CCUS on the backend, which produces a net-negative CO2 footprint with is even better than net zero. The questioner asked what Craft thought of this innovative plan.

“I applaud any technology and any innovation to extend the life of coal plants. Unfortunately, the government is not focused on innovation,” he said. “We have to get the mindset first, to keep what we’ve got, then replace it by what Steve’s got.”

“Unfortunately, innovation takes time,” said Craft. “I support innovation and that concept but personally believe that we’ve got to get politicians and political leaders to accept the fact that we need to protect the present fleet.”