



**ASM**  
INTERNATIONAL

Brandywine Valley  
Chapter

## **December Hybrid Technical Meeting**

***Tuesday – December 14, 2021***

### **Celebrating 100 Years of Rolling on the 206” Plate Mill**

***By Richard P. Smith Jr.***

***Senior Engineer, Cleveland Cliffs, Coatesville, PA***

**Locations: Virtual and In-Person**

**Virtual meeting with Zoom: <https://udel.zoom.us/j/93099039321>**

**In-Person at Bertucci’s Wilmington**

**3610 Concord Pike, Concord Gallery, Wilmington, DE 19803**

**Dinner: \$10 Students, \$20 Members, \$25 Non-Members**

**Please sign up for the meeting: <https://forms.gle/WxoC5tyi171FzNWh7>**

**Dinner 6:00 PM, Presentation 7:00 PM**

**Abstract:** The Cleveland Cliffs mill in Coatesville, PA was established in 1810 as the Brandywine Iron Works and Nail Factory. In 1818 the mill produced the first boiler plate rolled in America. As the plate market grew, driven by the demand for wider plates for both ship building and larger steam boilers for locomotives, rolling mills increased in size and power. By the end of the nineteenth century, the mill, now known as Lukens Steel Company, was competing for the largest plate mill in the United States – a title that it had held on three different occasions. After losing the title in 1903 when a new 152” wide mill surpassed its 140” mill, Lukens resolved to build the world’s widest plate mill, eclipsing a 180” wide mill with a 204” mill. Construction of this massive rolling mill began in 1916 and was completed in the spring of 1918. The mill rolled its first plate on May 22, 1918 and was crowned “The World’s Largest Plate Mill” – a title it held for over 40 years. The mill was widened to 206” in 1919, and it marked a historic anniversary in May 2018 when it completed one hundred years of dedicated service. The presentation will trace the steps that led to the design and construction of this engineering marvel. It is an interesting and intriguing story that is worthy of sharing as this historic mill enters its second century of operation.

**Bio:** Richard P. Smith Jr. is Senior Engineer, Operations Technology, for Cleveland Cliffs, Coatesville, PA. Rich earned a B. S. degree in Metallurgical Engineering from Lafayette College, a M. S. in Engineering Management and a M. S. in Materials Engineering, both from Drexel University. He also completed a M. S. in Mechanical

Engineering from Villanova University. Rich is also a registered professional engineer.

Rich started his career as a Metallurgist with Lukens Steel in Coatesville, PA after graduating from Lafayette College in 1977. During his 44 year career with Lukens, Bethlehem, ISG, ArcelorMittal and Cleveland Cliffs, he has had various assignments in the Quality Control, Research, Development, Operations, and Engineering departments at the Coatesville and Conshohocken plants, primarily in the melting, casting and rolling areas.

Rich is a Six Sigma Black Belt and was responsible for Bethlehem's Six Sigma program at the Coatesville and Conshohocken plants. He also taught in the Six Sigma program at Drexel University, as an adjunct professor.

As a life-long member of the Association of Iron and Steel Technology (AIST), Rich has served as chairman of the Plate Rolling Operating Committee and on the Board of Directors. He has also served as an instructor for the AIST Hot Plate Rolling Fundamentals training seminars.

Rich has authored papers in ingot mold design, leveling, and on the history of the iron and steel industry in Pennsylvania. He won the AISE Kelly Award and a Meritorious Award from the Mechanical Working and Steel Processing Conference, both for papers on roller leveling.

Rich has done extensive research on the American iron and steel industry from its birth in colonial times. He has also made numerous presentations on the history of iron and steelmaking in Pennsylvania as well as the development of the plate rolling industry in Coatesville.

Rich is married and has five grown children.

**Zoom Login Details:**

**<https://udel.zoom.us/j/93099039321>**

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**Meeting ID: 930 9903 9321**

**Find your local number: <https://udel.zoom.us/u/abtCJAV1wV>**