



Fifty-seven people attended a one-day “Intensive Water Quenching Workshop” on April 24th, 2013, in Cleveland, Ohio, sponsored by IQ Technologies Inc (IQT), and two of its Licensees, Akron Steel Treating Company and Euclid Heat Treating Company. Among the attendees were 6 engineers from Korea and 13 engineers from Japan, hosted by Dr. Takeshi Naito, the IQT Representative for Asia. The attendees learned more about the application of the IntensiQuench[®] process -- a “green” alternative to oil and polymer quenching.

Joseph Powell, President of IQT and AST, presented Dr. Nikolai Kobasko’s underlying theory of “intensive quenching” and the benefits from the application of ultra-fast water quench cooling versus traditional oil, water, polymer and gas quenching. Mr. Powell quoted quenching and distortion expert, Dr. George Totten, who stated, “Water (or water-salt) works fine, is cheaper, and better; if the system is properly engineered.”

Dr. Michael Aronov, CEO of IQT, presented numerous case studies outlining the application of the IntensiQuench[®] process to optimize the properties of a wide variety of steel parts; parts made from traditional “water quench,” plain, low carbon steels; to traditional “oil” or “polymer quench,” medium and high carbon or carburized steels; as well as, traditional “air hardening” steels of high alloy. An actual “high performance” steel mill roll made of “IQDI” (Intensively Quenched Ductile Iron) and SHO (Super High Output) punches were also on display. Information regarding the use of intensive water quenching for more uniform solution annealing of titanium, stainless and aluminum alloys was also presented.

Noted gear metallurgist, William Andreski, presented data from the intensive water quenching of four 32” diameter carburized railroad gears; the batch IntensiQuench[®] process was able to shorten the carburizing cycle by 33% versus oil for the same ECD.

Paul Sampson from NextTec presented data from Department of Defense live fire testing of “more consistently accurate” machine gun barrels that were induction through heated and then high-velocity, single-part, IntensiQuenched[®].

There was a presentation by Dr. Lynn Ferguson from Deformation Control Technologies outlining the use of the DANTE[®] computer modeling software for implementing intensive water quenching on various parts for optimizing alloy selections, and increasing beneficial compressive stresses for better part performance on carburized PyroWear 53 helicopter gear alloys.

Dr. Andrew Banka, from Airflow Sciences Corporation, gave a presentation on the use of computational fluid dynamics (CFD) modeling for optimization of intensive water quenching systems.

The next Intensive Quenching Technology Workshop will be held in Durham, United Kingdom, on June 5, 2013, by the IQT representative in Great Britain, Mr. Geoff Bolton, of Geoff B Associates. For more information, visit www.geoffbassociates.com.

For more information on IntensiQuench[®] methods or equipment, contact Dr. Michael Aronov, CEO, at m.a.aronov@sbcglobal.net, or visit www.intensivequench.com.