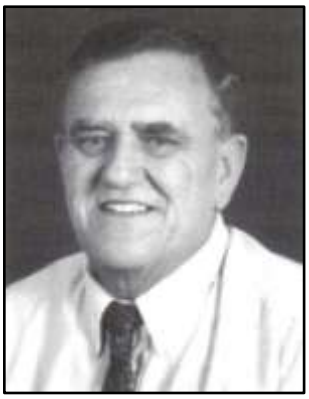

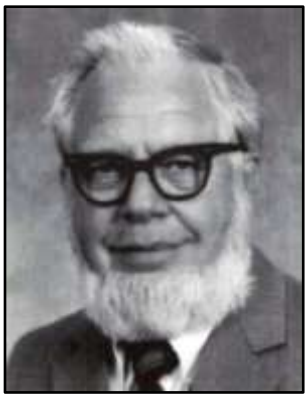

Donnell W. Agers and Ronald R. Swanson

1994 Medal of Merit Recipients

Both Don Agers and Ron Swanson were two of the key persons who recognized the potential for a new technology to replace the copper cementation process. During 1962, they first developed a technology that has become universally known as the Solvent Extraction-Electrowinning (SX-EW) process for copper recovery. This technology, totally unrelated to copper extractive metallurgy at its inception, now forms the basis for a revitalized copper industry throughout the world.

Don Agers graduated from the Missouri School of Mines at Rolla with a degree in metallurgical engineering. He was a key link between General Mills Chemicals Inc. and the mining industry during the inception and first commercial uses of the technology. Until 1975, he managed the applications laboratories and people in Tucson who successfully introduced this technology to the copper industry. He led extensive on-site pilot plant projects and liaison with the chemical research division. The first commercial application was in 1968 at the historic Bluebird mine of Ranchers Exploration and Development Company in Miami, Arizona.

Ron Swanson graduated from the University of Minnesota with B.S. and M.S. degrees in chemistry. He was the senior research chemist for General Mills Chemicals who developed the first commercially used SX reagents for copper recovery. Those chemicals formed the basis for the technology as it is employed today. At his retirement, Ron was Principal Scientist for Henkel Corporation, the successor to General Mills Chemicals. He holds 17 patents in the field of copper and other metal extraction by this process and has published numerous articles on the subject.