

Carbide Safety Lamps

by Dave Johnson

Carbide safety lamps, such as this Wilhelm Seippel model, are identified by their two compartment lower section.



Carbide was naturally seized upon as a substitute for oil in safety lamps just as it was in cap lamps. However it never enjoyed the success in safety lamps that it did in cap lamps. At least three major European mine lamp manufacturers developed safe and efficient carbide safety lamps. Carbide safety lamps never enjoyed any level of acceptance in the United States. Unlike the oil fueled safety lamps, the carbide safety lamps produced 10 candlepower.

While they produced more light for the miner, at least four drawbacks are inherent in carbide safety lamps. First, there is the increased weight of the lamp caused by the need for water and carbide, as well as the extra weight of the mechanism. Second, the miner must carry additional carbide and water to allow the lamp to burn through a full shift. Third, the lamp gets very hot when stationary at a work station, much more so than an oil fueled safety lamp. Fourth, the lamp requires more attention at the hands of the miner.

These drawbacks may be the reason that only three firms produced carbide safety lamps in any significant numbers. These firms were Friemann & Wolf (Germany), Wilhelm Seippel (Germany), and Societe Anonyme D'Eclairage et D'Applications Electriques, which produced Arras lamps. The Friemann & Wolf and Arras lamps seen here are much more sophisticated than the Seippel unbonnetted model.



(LEFT) Wolf carbide safety lamp.

(BELOW LEFT) Arras carbide safety lamp.

(BELOW) Arras carbide safety lamp cross section and parts list.

