

## **Optimizing water usage in a water jet, using the MT Connect System, specifically focusing on environments experiencing severe drought**

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The water jet has been used since 1852 and is one of the most diverse means for processing a wide range of materials. This way of processing has stood the test of time, and for the most part, has become environmentally friendly. However, it is not environmentally viable in areas of the world where severe drought is an issue. According to UNICEF, 11 countries are experiencing drought disasters. By making MT Connect the standard for the world, the data collected using the water jet, could optimize the ratio of abrasive-to-water usage for each material, and thereby reduce water waste. Currently, there are no universal reference standards, forcing experimentation and waste with each project. For example, after extensive research using resources available to me, I was unable to find how much water is used for an aluminum project. The MT Connect standard could be used to compile and coordinate data to provide uniformity for types of abrasives to be used for a myriad of materials, measurements, time and amount of water required. The data collected by MT Connect would provide standards for abrasives and materials which result in optimum water usage. MT Connect would guide the user by listing the strongest abrasive which can be used for each material, which would reduce project time and volume of water to a minimum. In this way, the MT Connect system would provide environmentally water conscious data and establish global uniform resource efficiency standards. This will save water and materials in that each project would not require the user to experiment with determining the optimal ratios.