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The technical revolution in remedial grouting for dams is well into its second decade of practice in the U.S. Technical papers, textbooks and Federal guidelines have been published detailing what is now regarded as “State of the Practice” for our dams. However, the authors observe that not all participants in this technique have fully appreciated the details and subtlety of the current methods, and indeed in many cases, bad practices dating back over 20 years are resurfacing. This paper highlights these issues and provides guidance in key areas, including:

- Design aspects (such as maximum safe water testing and grouting pressures).
- Construction details (such as the real value of a concrete working platform, the use of WDTH, the difference between refusal and closure, and the correct placement of standpipes for epikarst treatment).
- Analysis (the difference between real and Apparent Lugeon values).
- QA/QC (such as the tolerable range of properties for LMG and HMG grouts).
- Dam performance (such as Integrated Instrumentation Monitoring Programs, and long-term instrumentation).

The authors trust that this paper will be of value to owners, engineers and contractors alike, since all are committed to a successful project, but each has experienced issues in recent years.