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Intersections and sums of Gorenstein ideals. Preliminary report.

A complete local ring of embedding codepth 3 has a minimal free resolution of length 3 over a regular local ring. Such resolutions carry a differential graded algebra structure, based on which one can classify local rings of embedding codepth 3. The Gorenstein rings of embedding codepth 3 belong to the class called $\mathbf{G}(r)$, which was conjectured not to contain any non Gorenstein rings. In a previous work with Lars W. Christensen and Jerzy Weyman we gave examples and constructed non Gorenstein rings in $\mathbf{G}(r)$, for any $r \geq 2$. We show now that one can get such rings generically, from intersections of Gorenstein ideals. The class of the rings obtained from sums of such ideals will also be discussed. (Received February 19, 2016)