



INDUCED COLLAPSE DEMOLITION.



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A mechanically induced collapse of a structure involves a carefully designed and calculated sequence of structural pre-weakening followed by the application of sufficient force to induce a controlled collapse. The sequencing may include the pulling out of structural columns until the collapse is initiated or connecting high capacity steel pull ropes to the pre-weakened structure and generating enough horizontal force to enable the structure to rotate and collapse over itself.

Liberty Industrial have significant experience executing the mechanically induced demolition of large industrial structures and industrial infrastructure such as power station turbine halls, refinery infrastructure, coal bins, conveyors, steel chimney stacks, communications towers.

Liberty Industrial's own and operate numerous large demolition excavators ideal for carrying out mechanically induced collapses. Our fleet features machines as large as 260 tonne. We have several 120 tonne, 70 tonne and 48 tonne excavators. Often the horizontal force required to be generated to commence rotation and collapse is significant and not easily achieved through using conventionally sized demolition excavators.

Our experienced Demolition Engineers prepare engineered methods prior to undertaking any preparatory works with third party checks and sign off on methods and sequencing prior to commencement of weakening works.

We can also model and simulate (3D video) induced collapse demolition scenarios prior to execution using ASI Extreme Loading for Structures software.

Liberty Industrial are also licenced and qualified to carry out induced collapse using explosive demolition techniques. Often an engineered collapse requires a significant number of structural elements to be removed simultaneously. In this instance or when horizontal pull forces are too large to be generated by machines, Liberty Industrial employ explosive techniques that are developed, engineered and implemented through our in-house teams of highly experienced practitioners.