Dismantle, demolition and recycling

Following a major boiler failure our client’s ammonia plant was shutdown. Full decontamination of the plant proved impossible due to a lack of plant services.

10 years later the plant was to be demolished, by this time it was in a very dilapidated condition with very extensive arsenic and asbestos contamination.

ABB were engaged to manage the project.

Solution
ABB provided:
- Project management
- Demolition and site management supervision
- Planning supervisor and principal contractor
- Structural engineering assessments
- Risk and HSE analysis
- Forensic material consultancy
- Contract management

The project needed to meet strict company recycling targets and handle a heightened public awareness over chemical contamination. The project commenced with eight months of intensive investigation and negotiation with the EA, HSE and a major steel smelting company who would recycle the plant structure.

During this investigation smelting trials were completed and new monitoring equipment installed which confirmed that the arsenic contamination was not liberated to the environment either in gaseous or dust format but was entrained in the re-smelted steel.

ABB use a novel approach to demolition to safely recycle an arsenic contaminated plant.
This allowed remote demolition techniques to be used to dismantle the structure leaving arsenic contamination in-situ without the need for cleaning. Rigorous control of materials on site ensured a consistent level of arsenic contamination arriving at the smelting plant. This ensured that only 10% of the 3000tes arising from the demolition was sent to landfill.

Benefits
- The plant was demolished with an excellent safety performance
- Project health, safety and environmental objectives were closely aligned to business aims through close liaison between ABB and the client
- The novel approach of recycling all material without cleaning reduced the safety risk to personnel whilst meeting strict company recycling targets
- Effective project management allowed complex interfaces between HSE (Health and Safety Executive), Environmental Agency (EA), Trade Unions, haulage companies and various contract companies to be successfully managed