



# **JET** *DEMOLITION (PTY) LTD*

Africa's Premier Demolition Company



## **Africa's Premier Demolition Company**

At Jet Demolition, large turnkey and technically demanding projects are our focus, and we are passionate about demolition. Demolition of Heavy Industrial, Petrochemical and Mining Plants and Infrastructure are our primary areas of operation.

Jet Demolition, established in 1994, provides professional demolition services to leading companies in the heavy industry, petrochemical, mining and commercial sectors in Africa and beyond. Our technical base and long-term commitment to continual improvement of all we do has produced a firmly-established demolition company that is unparalleled in terms of safety, technical and contract performance.

### **Our Key Strengths**

- Full- and long-term commitment to our business services with an emphasis on International Best Practice and mechanisation.
- One of the few companies internationally that offers in-house controlled explosive expertise, as well as a full range of advanced mechanical demolition services.
- Technically-based company with 10 members of staff having technical degrees or diplomas.
- Fulltime, trained, experienced and motivated staff with an embedded safety culture consistently achieves the highest levels of safety performance and productivity.
- Fulltime dedicated SHEQ department. OHSAS 18001, ISO 9001:2015, NOSA 5 Star and NOSCAR certification.
- Extensive range of modern equipment with 28 demolition excavators up to 102 tonnes in size and 35 m reach, with specialised high-performance demolition tools including full in-house support team.
- Long established culture and track record of superior performance on large, complex and technically demanding projects.
- Highest levels of corporate governance and financial prudence.
- Largest and Most Technically Advanced Demolition Company in Africa.

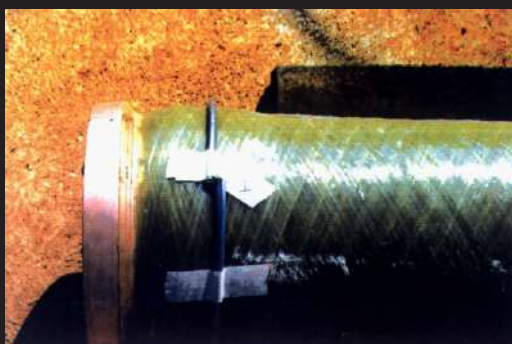
### **Main Areas of Expertise**

- Heavy Industrial, Petrochemical, Mining and Large Commercial Demolition Projects.
- Turnkey Projects for Purchase, Decontamination, Demolition and Rehabilitation of Industrial and Mine Plants.
- Fast-track Shutdowns and Rapid Demolition under 24/7 Conditions.
- Controlled Explosive Demolition of Large Structures Under Demanding Conditions.
- Advanced Mechanical Demolition Methods and Innovative Technical Solutions.
- Dismantling of Equipment and Structures.
- Value Recovery from Safe Metals and Recycling.
- Decontamination of Radiological Hazards, Asbestos and Hazardous Substances.
- Environmental Rehabilitation of Industrial and Mine Sites.

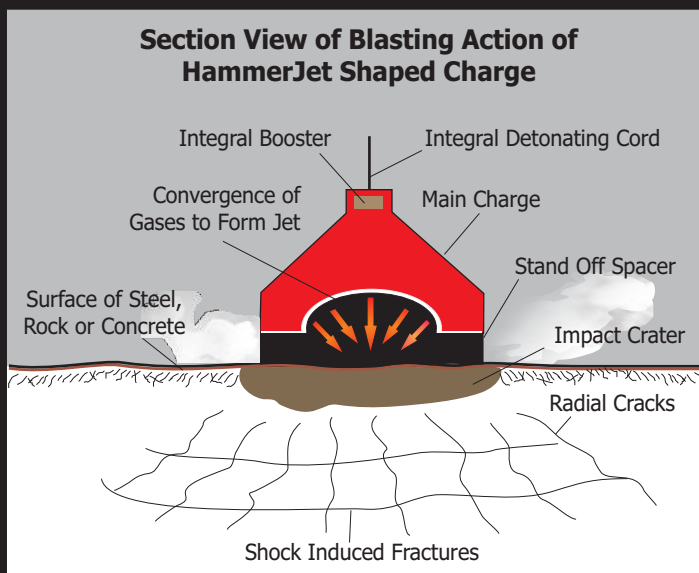
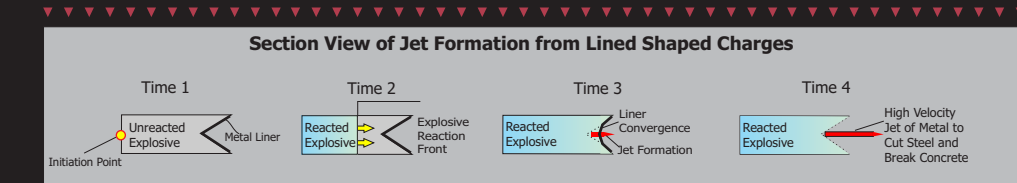
Jet Demolition derives its name from the jet action produced by shaped charges. Each shaped charge consists of a main charge and a metal liner. When detonated, a reaction takes place beginning at an initiation point. An explosive reaction travels from the initiation point through the charge and causes the metal liner to collapse, converging explosive gases onto a single point. This convergence of gas causes the liner itself to form a high velocity jet of metal which is expelled from the charge, breaking concrete and cutting steel.



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The HammerJet Family of Charges  
0.15 to 5.0 kg per Charge



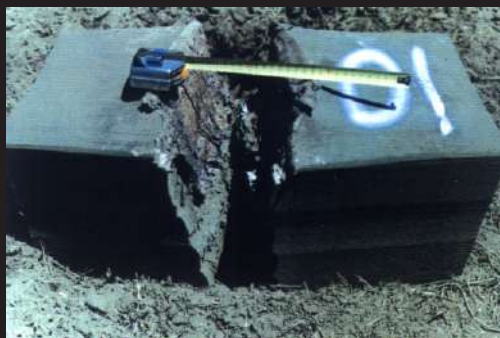
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A SabreJet Charge (20 g/m) Wrapped Around a Fibreglass Pipe (top) and the Resulting Cut After Firing (bottom)



## Shaped Charges

The figures on this page illustrate our "toolbox" of shaped charges which enable us to tackle any job.

These specialised charges are used for demolition of concrete and steel structures, boulder breaking on mines and construction sites, specialised applications such as descaling of kilns and furnaces and for splitting massive ferrous objects such as rollers, ingots and pool iron.



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Cutting Action of a 3.0 kg JetAxe Charge on a 250 mm Thick Steel Billet



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A SabreJet Charge (400 g/m) From Two Different Views (upper and middle) and the Slicing Effect Produced on 25 mm Thick Steel (lower)



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A ThunderJet Charge and the Breakage Effect Produced by Blasting a Concrete Block Measuring 10.7 Cubic Metres



Jet Demolition has over 30 years' experience in applied R & D of explosives and blasting techniques for industrial applications.

- ▶ 50 mm Anchor Bolt Cut by 150 g
- ▶ HammerJet Shaped Charge



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Splitting Action Produced by a ThunderJet Charge on a 900 mm Diameter Steel Roller (left) and a 900 mm x 1400 mm Steel Ingot (right)





Sequential Explosive Demolition of 5 Concrete Cooling Towers

Explosive Demolition of a 68 m High Fire Damaged Gas Holder Adjacent to Main Plant Power Line and Gas Line

Mobile Crusher for Use in Recovery of Gold During Gold Plant Demolition. Gold Bearing Concrete is Crushed to -40 mm Prior to Milling



Explosive Demolition of an Unusually Long Steel Structure (7 storeys high x 250 m long)



Controlled Mechanical Dropping of Clustered Cement Silos



Innovative Demolition of a 76 m High Concrete Chimney in Only 7 Days at an Oil Refinery Using a 1 000 Tonne Crusher Suspended from a 440 Tonne Crane. Blasting Was Not an Option Because of Insufficient Space and Safety Considerations



Explosive Demolition of Large Concrete Mill Building

Mechanical Demolition of Massive Concrete and Steel Structures at Petrochemical Plant



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# Turnkey Demolition and Rehabilitation Projects



▲▲▲▲▲ Mine Shaft Infrastructure Demolition and Rehabilitation Including Permanent Shaft Sealing to DMR Requirements

▲▲▲▲▲ Closure and Rehabilitation of Vent Shaft and Surrounding Area of Redundant Coal Mines. Project Was Completed in One Month



▲▲▲▲▲ Progression of a Turnkey Project : Gold Plant Purchase, Equipment Salvage, Radioactive Decontamination, Gold Recovery, Demolition of Steel and Concrete Structures and Site Rehabilitation Over an 18-Month Period

▲▲▲▲▲ Demolition and Rehabilitation of Large Gold Mine Training Centre



▲▲▲▲▲ Turnkey Project : (1) Plant Demolition; (2) Reshaping and Soil Cladding of Waste Dump Involving 300 000 m<sup>3</sup> of Earthmoving; Installation of Surface Diversion Canals, Subsurface Drains and Evaporation Ponds; (3) Rehabilitation and Establishment of Grass



# Turnkey Demolition and Rehabilitation Projects



Before



After



Turnkey Projects on Large Gold Plant : Plant Purchase, Decontamination, Equipment Salvage, Gold Recovery, Demolition of Steel and Concrete Structures and Rehabilitation



Before



After



Smelting of Lead for the Removal of Radioactive Contamination and Production of Large Ingots for Reuse



Decontamination of Radioactive Equipment Recovered from Uranium, Acid and Gold Plants



# High Reach Demolition



Controlled Demolition of Building Containing Fully Operational Municipal Substation



Safe Top-Down Demolition of Chimney



Mechanical Demolition of Plant Using Specialised High Reach Machine



1



2



3



4

Demolition of 3 Gas Producers Located 1 m from a Storage Building Which Remained



Controlled Demolition of Steel & Concrete Structure Adjacent to Operating Gas Plant



Controlled Partial Demolition for Refurbishment



Controlled Mechanical Demolition of Concrete and Steel Structures



High Reach Excavator Demolishing Mine Shaft Winder House





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Mechanical Demolition of PSS Plant



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Rapid Demolition of Acid Plant by High Reach Excavator



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Demolition of Heavy Steel Crusher Structure by a Large Hydraulic Shear



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Cold Cutting and Rigging of Petrochemical Plant in Active Process Area that Prohibits Hotwork



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80 Tonne Demolition Excavator with a Large Specialised Demolition Shear



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Demolition of Petrochemical Tank Using Specialised Hydraulic Shears



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Cold Cutting of Industrial Plants Using Specialised Hydraulic Shears



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**Implosion of the Babcock Building in Sandton City Centre (8 m from glass facades)**



A close-up photograph of a large, dark, textured object, possibly a piece of machinery or a large rock. A circular opening is visible on the left side, and some wiring or cables are visible on the right side. The object is surrounded by a rough, rocky surface.



## Implosion of the Landmark Hotel 147 in Welkom



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**Implosion of the Fire Damaged Munitoria Building in Pretoria City Centre Using 300 kg of Explosives. Removal of 44 000 Tonnes of Rubble Was Done in 25 days. The Entire Project Was Completed in 3 Months**

**Clean Up of the Fire Damaged Munitoria Building Prior to Blasting. A Total of 1 500 Tonnes of Burnt Debris Was Removed**



## Mechanical Demolition of Commercial Buildings





# Shutdowns and Rapid 24/7 Projects



Overnight Demolition and Removal of 3 Large Bridges on the N1 Motorway Between Johannesburg and Pretoria



Turnkey Demolition Solutions for Furnaces, Structures and Complete Plants \* Rapid Furnace Demolition During 24/7 Shutdowns on All Types of Furnaces \* Technically Advanced Mechanical and Explosive Methods \* Structural Steel / Pipe Works Strip-outs and Demolition \* Concrete Civils and Refractory Demolition \* Solid Metal Lancing and / or Blasting and Removal \* Hazardous Materials Removal and Disposal





Before



After

Partial Demolition of Operating Gold and Acid Plant Including Controlled Topping of 71 m High Stack Within 2 m of an Active Plant and Equipment

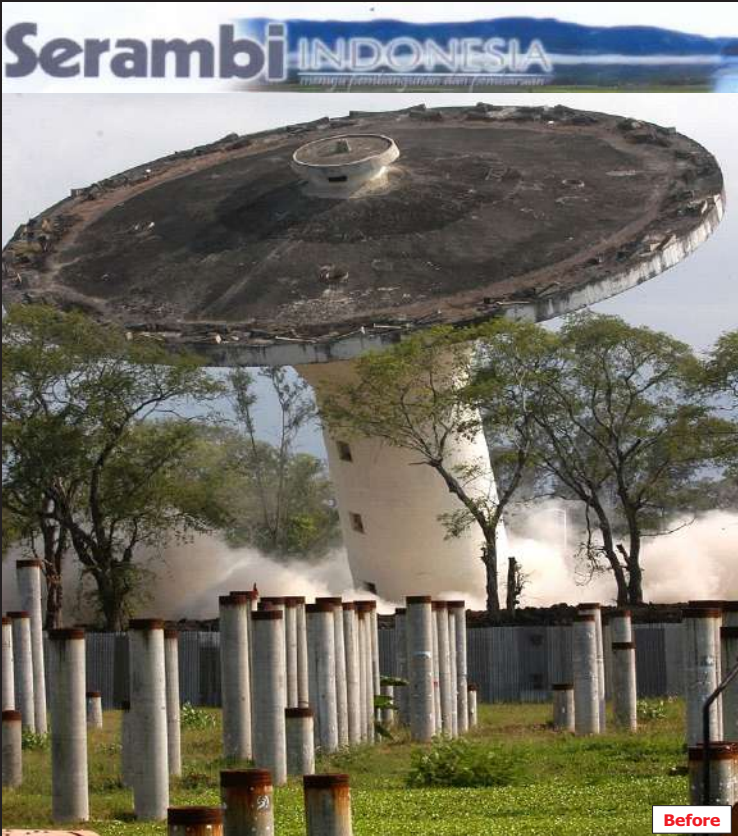


During



After

Demolition of Durba Gold Plant Including Gold Recovery at Kibali, Democratic Republic of Congo



Before



After

Explosive Demolition of the 44 m High Taman Sari Water Tower Damaged in the December 2004 Tsunami in Banda Aceh, Indonesia, for the United Nations Development Programme (UNDP)



Demolition of an Old Gold Treatment Plant and Redundant Arsenic Plant in Ghana





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Asbestos Cement Removal from Industrial Plants  
According to Government Regulations. Jet Demolition  
(Pty) Ltd is a Registered Asbestos Contractor



# Second Hand Equipment

Recovery and Resale of Reusable Equipment is Often an Integral Part of Large Industrial, Petrochemical and Mining Demolition Projects Where Value Recovery Plays an Important Role in the Project Economics





On all of our demolition projects, the paramount concern is for the safety of persons. Over the past 25 years, we have developed by far the best safety programme in the demolition industry in South Africa. As a result of our continual focus on safe work practices and mechanisation, Jet Demolition consistently achieves the highest levels of safety performance, equivalent to the best to be found internationally.

## Key Elements of our SHEQ System

- Bonafide Management Commitment to the Pursuit of SHEQ Excellence.
- Fulltime, Trained, Experienced and Motivated Staff with Embedded Safety Culture Provides a Foundation for the Highest Levels of Safety Performance.
- Fulltime Dedicated SHEQ Department Focuses on Achieving Continual Improvements to our Safety Programme and Safety Performance.
- SHEQ Management System Based on International Standards: NOSA CMB 253, NIOSCAR, OHSAS 18001:2007 and ISO 9001:2015.
- Internal Quarterly Audits.
- Annual External Audits by Authorised Inspections Authorities.