

# Reverse Engineering of X-Ray Tube Component



## Project scope

Scanning of all components, Convert the 3D modelling (Casting & Machining) based on Customer template

To Perform teardown Post 3D Scanning

Reverse Engineering of 5nos of X-Ray Tube main assembly which includes 5 main assembly & Sub parts in it

## Challenges

- High Level Assembly Tear Down
- Backward & Forward Knowledge gathering

## Input

- Main assembly – 5 Nos (32-part level components)
- X-Ray Machine : Customer Variant and 3 other variants in market
- Mechanical & Electrical Guidelines, BOM for X-Ray Machine

## Deliverables

- Part wise cost difference for all 4 machines
- Design Comparison of all 4 X-Ray Systems
- Comparative Analysis of Packing & Installation
- Tear Down Report of a Collimator
- BOM Generation of all 4 Collimator
- Electrical Block Diagram of all Sub-system
- Comparative Electrical Analysis
- Cost Analysis Report

## Value Addition

### Seven VAVE Proposals highlighting :

- Changes in cross sections of pipes & beams
- Changes in material of various Plastic & sheet metal components
- Saving Tool cost by 18" and 37% in overall capex
- Saving in Processing & Inventory Cost by 14" and 8% resp