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Appendices

Methods of 3D printing covered in the analysis:

- 3D inkjet printing
- Chemical vapour deposition (CVD)
- Cold spray
- Digital light processing (DLP)
- Direct metal deposition (DMD)
- Direct metal laser sintering (DMLS)
- Electron beam sintering (EBS)
- Fused deposition modelling (FDM)
- Laminated object manufacturing (LOM)
- Laser powder forming
- Micro induction sintering
- Microlithography
- Microstereolithography
- Physical vapour deposition
- Rapid plasma deposition
- Robocasting
- Scanning laser epitaxy / Selective laser-induced etching (SLE)
- Selective laser melting (SLM)
- Selective laser sintering (SLS)
- Solid freeform fabrication

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- Stereolithography (SLA)
- Thermal spraying
- Transient liquid phase sintering
- Vacuum casting

Application areas covered in the analysis:

- Avionics
- Body
- Cockpit
- Defense weaponry
- Flight controls
- Fuselage
- Landing gears
- Passenger accessories
- Pilot accessories
- Spacecraft
- Structural components
- Tooling
- Wings and control surfaces
    - Empennage
    - Stabilizer
    - Rudder
    - Elevator
    - Trim tabs
    - Aileron
    - Flaps
    - Slats
    - Wing tip
    - Tail
    - Rotor assembly
    - Rotor blade
    - Tail rotor

Materials used for 3D printing covered in the analysis:

Composites

- Aramid fibre
- CFRP (carbon fibre reinforced polymer)
- CMC (ceramics matrix composites)
- Fibre reinforced polymers
- Fused Silica Glass
- GFRP (Glass fibre reinforced polymer)

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Polymers

- PEEK (Polytetrafluoroethylene)
- PMMA (Poly Methyl Methacrylate)
- Polycarbonates
- Polypropylene
- Polyurethane
- PTFE (Polytetrafluoroethlyene)

Metal alloys

- Aluminium alloy
- Chromium alloys
- Cobalt alloys
- Copper alloys
- Nickel alloys
- Steels
- Titanium alloys
- Vanadium alloys

Metals

- Aluminium
- Antimony (Sb)
- Beryllium
- Bronze
- Cadmium
- Chromium
- Cobalt
- Copper
- Gallium
- Gold
- Indium
- Iron
- Lead
- Magnesium
- Manganese
- Mercury (Hg)
- Molybdenum
- Neodymium (Nd)
- Nickel
- Niobium
- Palladium
- Platinum
- Rhenium
- Rhodium
- Scandium
- Silver
- Tantalum
- Tin
- Titanium

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Ceramics

- Alumina
- Barium oxide
- Barium strontium aluminosilicate
- Calcia
- Calcium fluoride
- Ceria
- Cordierite
- Cryolite
- Cubic boron nitride
- Dysprosium oxide (Dy203)
- Gadolinia
- Garnet
- Graphite
- Hafnium oxide
- Iron oxide
- Kaolin
- Lanthanum fluoride
- Lanthanum oxide
- Magnesia
- Mullite
- Neodymia
- Samaria
- Sapphire
- Scandia
- Scandium oxide
- Silicon carbide
- Silicon dioxide
- Silicon nitrate
- Silicon nitride
- Spinel
- Steatite
- Tantala
- Tantalum carbide (TaC)
- Thorium oxide
- Tin oxide
- Titanium oxide
- Ytterbium oxide
- Yttria
- Zirconium dioxide
- Zirconium silicate

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