STREAM @ Materialise

Maarten Valckenaers - Sim Event - 21 oktober 2013
3D Printing: hype or real benefit

Launch of the first fully functional elastic material in 3D Printing - TPU 92A

Design by Iris van Herpen and Julia Koerner, Voltage Show, Paris, January 2013
About Materialise

• Started in 1990
• Technology company
• Leaders in the field of AM
• HQ in Belgium, offices all over the world
• Worldwide more then 850 employees
A growth future for the AM industry in Flanders

Industrial activities, but limited

Currently strong industry

STREAM domains

Research level

Machines & Modification

Materials

Process

Post-Process

Leading-edge applications & components

Software tools (design, build prep.)
3 Core Competences

1. Factory for 3D Printing

2. Digital CAD

3. Medical Image Based Engineering and Manufacturing
The Materialise Group

Additive Manufacturing Solutions

Software for Additive Manufacturing

.RGX

Digital CAD

Engineering

Cranio-Maxillo Facial

Orthopaedics

Biomedical Engineering

RapidFit+
Real benefits of 3D Printing

1. Reduce carbon footprint
2. Shorten time to market
3. Avoid investment in manufacturing tools
4. Make small series possible
5. Surpass today’s design limitations
   Solve complex design problems
Real benefits of 3D Printing

5 Surpass today’s design limitations

When product complexity is high

When you have limited space

When you need to integrate functionality

When you need to transport air, water, heat
Reality @ Materialise:
The World’s largest factory for 3D Printing

Stereolithography
- 32 machines
- 12 Mammoth machines
- 8 materials
- 43,000 parts per year

Laser Sintering
- 15 machines
- 4 materials
- 190,000 parts per year

Vacuum Casting
- 28 materials
- 2,300 moulds per year
- 44,000 parts per year

Fused Deposition Modeling
- 30 machines
- 10 materials
- 17,000 parts per year

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Fully equipped workshop for part finishing
Small series of seals and gaskets
Complex tubes, hoses and manifolds
Elastic lightweight structures
Components for the shoe, fashion and leisure industry
Cushioning and shock absorption
Rapid Prototypes of elastic components
Reality @ Materialise:
The Pinovo Case

**Product**
Dedicated tools for corrosion treatment in oil and gas industry

**Goal**
Ergonomics, low weight
No plant shut-down
Quick response to requests
Actual barriers for AM

• Closed market

  • Machine manufacturer = material supplier

• Home-printer market: open source

• Focus on machine sales

• Characterization of Materials is limited
I want your material for AM