《先进制造技术》

实验指导书

《先进制造技术》课程组

学生姓名:

班　　级:

专　　业:

吉林大学 机械科学与工程学院

2006.9

目　录

1. (RPM)

1.1

1. RPM

2. RPM RPM

3. RPM

1.2

1. CAD

2. STL STL FDM

3.

4.

5.

1.3

1. FDM

2.

3. PVC

1.4

1.4.1

(Rapid Prototyping, RP) 20 80

RP

图1

1.4.2 RP

RP CAD

1

STL

2

( )

CLI

3 ,

4

1.4.3

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图 2 LOM

1.4.4

2 0   90   ,

,   1 0

1 0   (   )
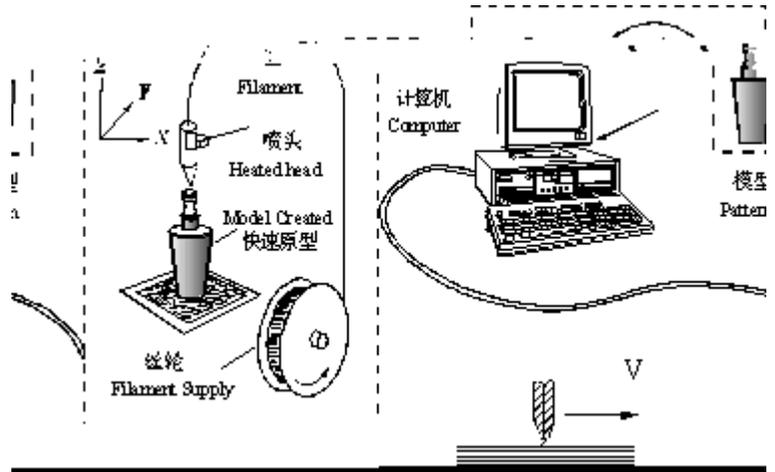
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1.4.5

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　　1.5.1

　　　　　　　　　　　　　　　　　　　　　　　　　　　　FDM

　　　MEM250

　　　　　　　　　　　　　　　　　　　　　　　　　　　CATIA

　　　　"　*.STL"　　　　　　　　　　　　　　　　　"　　_　　.STL"

"　99032_taoyifei.stl"

　　1.5.2

　　　　　　　　　　　　　　　　　　　　　　　　　"　　_　　.CLI"

"　99032_taoyifei.cli"

1.5.3

CLI

220   70

100× 100× 1mm

1.5.4

1
2
3
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1.5.5

1
2   word
3

4

1.6

    1)   "   "

    2) $80 \times 80 \times 50mm$

    3                                    $5mm$

    4)   99032_taoyifei.cli

    5)

1.7

    1.

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    3.

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    5.

      1   CAD   STL

Alibre   File   -> Export

	STL
	2. Aspect Ratio —— / 1
	0
	3. Surface Tolerance ——
	0.0000
	4. Vertex Spacing —— 0.0000,
ProE	1. File -> Export -> Model
	2. File -> Save a Copy -> .STL
	3. 0
	4. Angle Control 1
ProE Wildfire	1. File -> Save a Copy -> Model -> STL (*.stl)
	2. 0
	3. Angle Control 1
Rhino	File -> Save As .STL
SolidDesigner (Version 8.x)	File -> Save -> STL
SolidDesigner (not sure of version)	File -> External -> Save STL STL -> Binary -> -> 0.001mm Max Deviation Distance
SolidEdge	1. File -> Save As -> STL
	2. Options Conversion Tolerance 0.001in 0.0254mm Surface Plane Angle 45.00
SolidWorks	1. File -> Save As -> STL
	2. Options -> Resolution -> Fine -> OK
Think3	File -> Save As -> STL
Unigraphics	1. File > Export > Rapid Prototyping -> Binary
	2. Triangle Tolerance 0.0025 Adjacency Tolerance 0.12 Auto Normal Gen On Normal Display Off Triangle Display On

2

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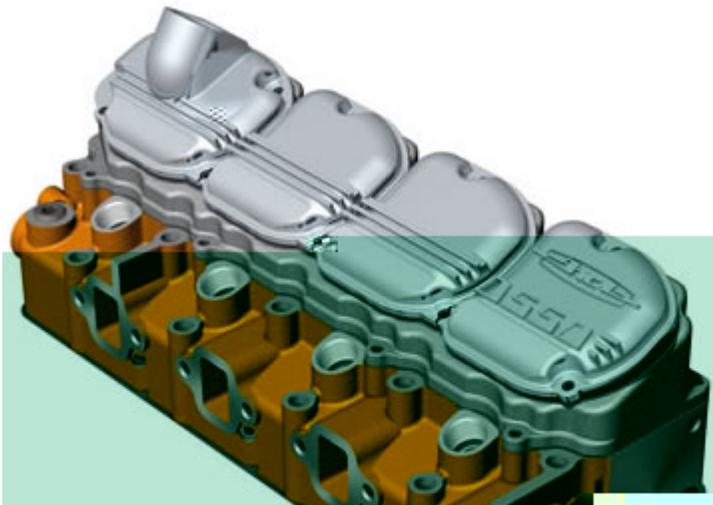10

11

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2.

2.1

    1.

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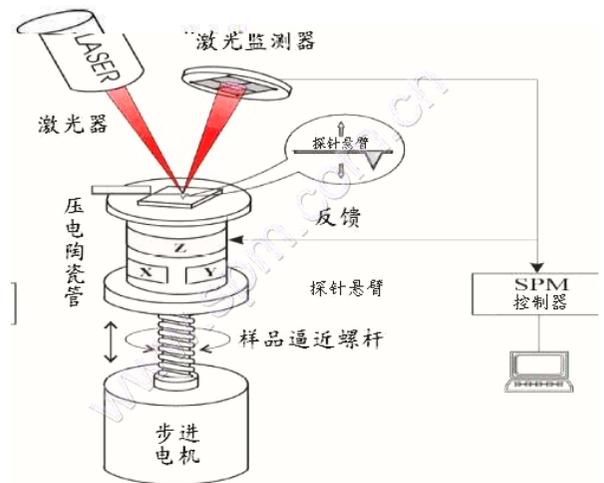
    3.

2.2

    1.

    2.

    3.

2.3

    1.

    2.

    3.

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2.4.1

3.

Atomic Force Microscope Employing Laser Beam Deflection for Force Detection, Laser-AFM ——

    1   Laser Diode   Cantilever

Detector

10^{-9}
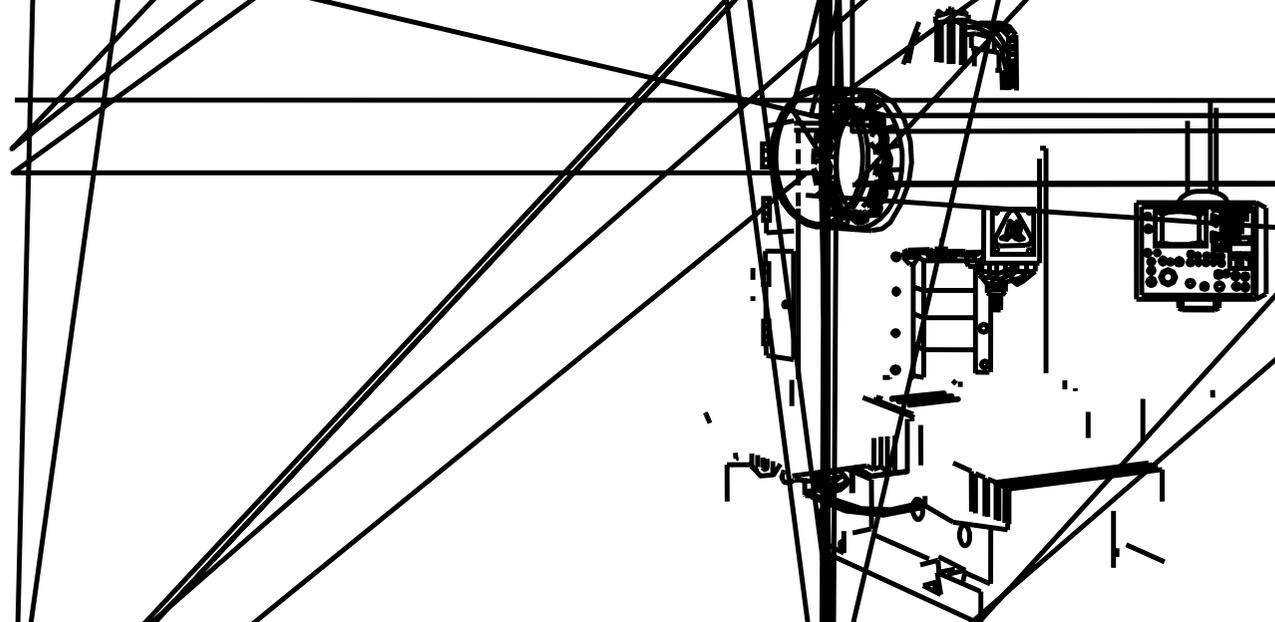
(Feedback)

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2.4.2

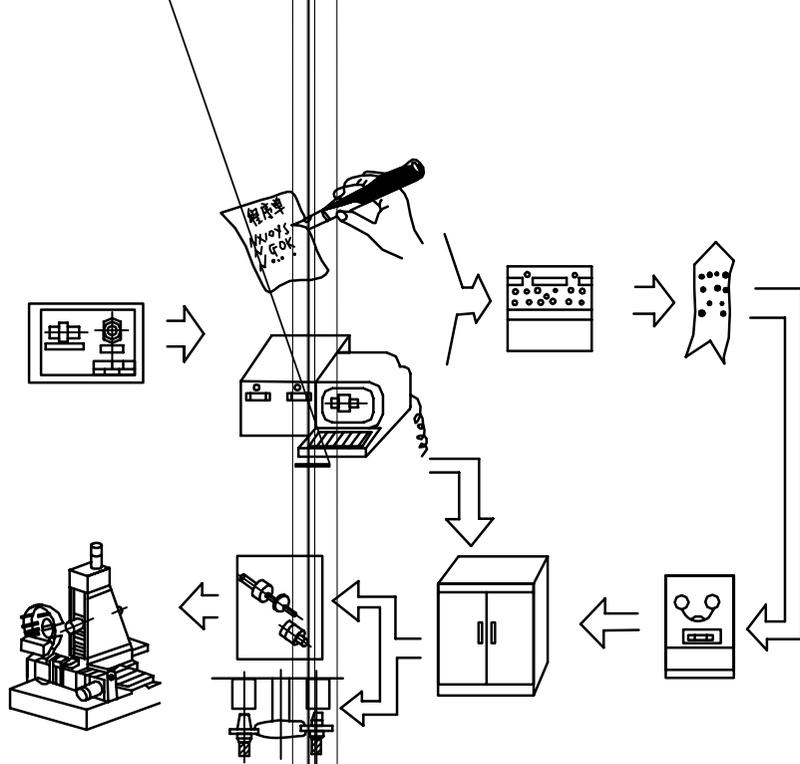**1**

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2.4.3

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