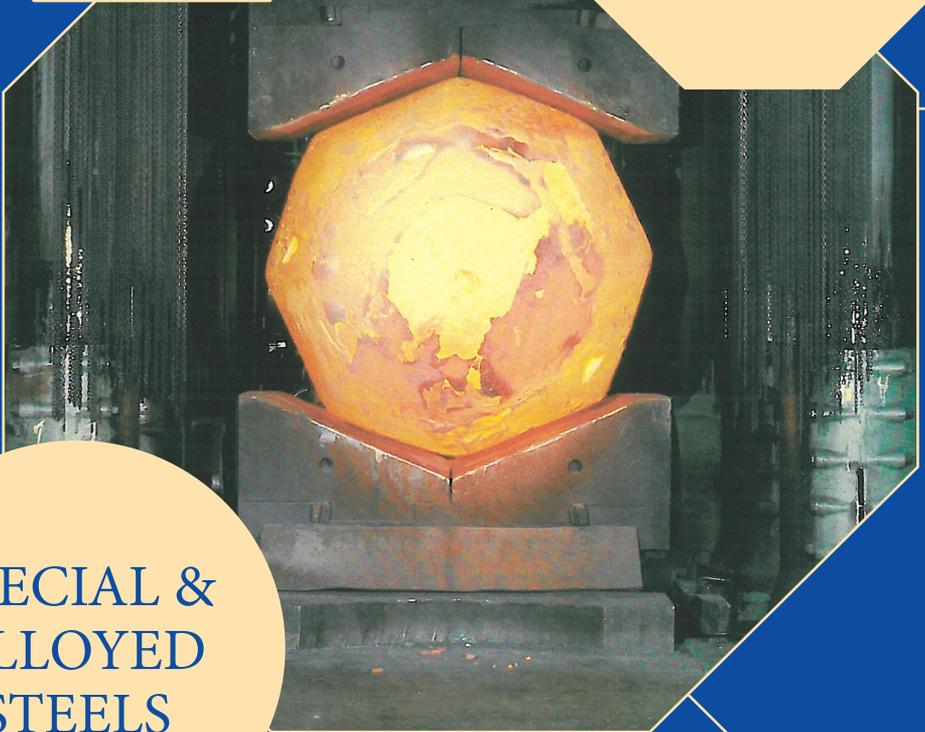


Milan Švajger

OPEN DIE
FORGING
TECHNOLOGY

WITH
FAILURE
ANALYSIS



SPECIAL &
ALLOYED
STEELS

Member of

INTECO

Team

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*OPEN DIE FORGING
TECHNOLOGY
WITH
FAILURE ANALYSIS*

2023

Dedication

I dedicate this book to my wife Karolina, who has selflessly supported me in my writing and has always stood by me throughout my life.

Foreword

The amount of steel processed by forging represents only a small share of total world steel production. Taking into account the added value created in the process of transforming a cast ingot into a forged product, which is subsequently machined and heat treated into a final product suitable for use, forging represents a major economic importance of the steel industry.

The book deals with the technology of open die forging of forgings of larger dimensions, i.e. forging on open die hammers and presses with free spreading as well as on radial forging machines, and its regularities and faults that occur before, during and after forging. The technological equipment required for open die forging of alloy tool steels and special steels, the forging technology from ingot to forging, the heating technology before forging and cooling after forging, as well as the heat treatment of forgings are presented.

There are many different books on the field of hot plastic processing of steels by forging and they cover different areas of forging in different ways. The book "Technology of Open Die Forging of Special Steels with Failure Analysis" by Milan Švajger deals extensively and in depth with the technology of open die forging also from a technological point of view. With a focus on the technological process of forging semi-finished products of larger dimensions, machines and devices and faults, it fills a gap in the scientific and professional technical literature in the field of forging of semi-finished steel products.

The added value of the book lies mainly in the technological knowledge that the author has acquired over several decades as a development engineer, manager and expert consultant in the field of open die forging of steel products. This is why the book is not only aimed at a narrow target group of experts in the field of open die forging. It will find its way onto the shelves of anyone interested in metal forming technologies, especially high alloyed special steels.

Ljubljana, in the spring of 2023

Peter Fajfar

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Contents

<i>A BRIEF HISTORY OF STEEL FORGING</i>	1
1. FORGING EQUIPMENT	3
1.1. Bogie Hearth Furnace.....	3
1.2. Forging Hammer.....	5
1.3. Radial Forging Machine.....	7
1.4. Hydraulic Forging Press.....	14
1.5. Forging Tools and Design.....	21
1.5.1. General Aspect of Tools.....	21
1.5.2. Flat dies.....	22
1.5.3. V-dies.....	24
1.5.4. Planishing dies.....	28
2. INGOTS	30
2.1. Conventional ingots.....	30
2.2. Remelted ingots.....	33
2.3. Qualification of ingot.....	35
2.4. Treatment of stripped ingots.....	36
3. HEATING OF INGOTS	38
3.1. Basic considerations.....	38
3.2. Heating rate.....	39
3.3. Heating cycle.....	40
3.4. Ingot homogenization.....	42
4. BASICS OF FORGING	45
4.1. Deformation resistance.....	45
4.2. The crystal lattice from the perspective of plastic deformation.....	46
4.3. Flow of material.....	50
5. FORGING TEMPERATURE AND HOT WORKABILITY	52
5.1. Hot torsion test and plasticity of steels.....	52
5.2. Forging temperature, deformation speed and flow stress in steels.....	55
5.3. Bite ratio.....	60
5.4. Estimating the amount of deformation.....	64
5.5. Reduction of area or solid reduction.....	67
5.6. Spreading in open die forging.....	69
5.7. Influence of deformation on microstructure.....	74
6. FORGING PRACTICE	77
6.1. Ingot cogging.....	77
6.1. Pre-forging.....	78
6.2. Final forging.....	80
6.3. Planishing.....	81
6.4. Upsetting.....	83
6.5. Punching (piercing).....	88

6.6.	<i>Mandrel forging</i>	89
6.7.	<i>Forge cutting</i>	91
6.8.	<i>Straightening</i>	93
6.9.	<i>Technological guidelines for forging certain special steels</i>	93
7.	FORGED PRODUCTS AND YIELD OF MATERIAL	98
7.1.	<i>Forged semi-finished products</i>	98
7.2.	<i>Forged finished products</i>	98
7.2.1.	<i>General</i>	98
7.2.2.	<i>Forged bars</i>	99
7.2.3.	<i>Shaped open die forgings</i>	99
7.2.4.	<i>Closed die forgings</i>	99
7.3.	<i>Yield of input material</i>	100
7.3.1.	<i>Material yield of conventionally cast ingots</i>	100
7.3.2.	<i>Material yield of remelted ingots</i>	102
7.3.3.	<i>Surface oxidation and scale</i>	102
8.	DESIGN OF THE FORGING PROCEDURE	104
8.1.	<i>Drawing of the forging</i>	105
8.2.	<i>Determination of forging weight</i>	106
8.3.	<i>Adaptation of forging parameters to quality requirements</i>	107
8.4.	<i>Selection of ingot size</i>	108
8.5.	<i>Heating diagram</i>	109
8.6.	<i>Forging procedure</i>	110
8.6.1.	<i>Cogging, pre-forging and upsetting</i>	110
8.6.2.	<i>Roll forging</i>	112
8.7.	<i>Cooling after forging</i>	116
8.8.	<i>Heat treatment after forging</i>	117
9.	HEAT TREATMENT OF FORGINGS	119
9.1.	<i>Reasons and aims</i>	119
9.2.	<i>Cooling after forging</i>	120
9.3.	<i>Furnaces for the heat treatment of forgings</i>	123
9.4.	<i>Heat treatment processes of forgings</i>	124
9.4.1.	<i>Stress relieving annealing</i>	124
9.4.2.	<i>Soft and spheroidize annealing</i>	125
9.4.3.	<i>Full annealing</i>	127
9.4.4.	<i>Normalisation</i>	128
9.4.5.	<i>Heat treatment of austenitic steels</i>	131
9.4.6.	<i>Hardening & tempering</i>	132
10.	FAILURE ANALYSIS OF OPEN DIE FORGING	135
10.1.	<i>Faults originating from the ingot</i>	137
10.1.1.	<i>Ingot surface faults</i>	138
10.1.1.1.	<i>Panel crack</i>	138

10.1.1.2.	Hot tears.....	141
10.1.1.3.	Rippled surface of conventional ingots.....	143
10.1.1.3.1.	Cold welds.....	145
10.1.1.3.2.	Rippled surface.....	147
10.1.1.3.3.	Rippled surface due to overflow.....	150
10.1.1.4.	Rippled surface of ESR ingots.....	151
10.1.1.5.	Gravitational crack.....	154
10.1.1.6.	Cracks due to eccentric casting and uneven cooling.....	156
10.1.1.7.	Mapped surface of ingots.....	157
10.1.2.	Ingot internal faults.....	158
10.1.2.1.	Shrink hole.....	159
10.1.2.2.	Porosity-axial voids.....	160
10.1.2.3.	Subsurface porosity.....	161
10.1.2.4.	Porosity of high alloy steels.....	162
10.1.2.5.	Non-metallic inclusions.....	165
10.1.2.6.	Inhomogeneity of ingot.....	166
10.1.2.7.	Flakes.....	174
10.2.	Faults arising from forging.....	177
10.2.1.	Discrepancy between ingot shape and steel grade.....	178
10.2.2.	Embossed scale in the forging surface.....	180
10.2.3.	Forging fold.....	181
10.2.4.	Internal forging cracks.....	182
10.2.5.	Surface forging cracks.....	185
10.2.6.	Forging cross and oblique square (rhombus).....	188
10.2.7.	Incomplete forging penetration.....	189
10.2.8.	Cracks due to cooling after forging.....	191
10.2.9.	White spots.....	192
10.2.10.	Fishtail (trumpet).....	193
10.2.11.	Uneven heating, superheating and burning.....	194
10.2.12.	Uneven structural properties.....	196
10.2.13.	Forging faults on radial forging machines.....	196
10.2.13.1.	Fishtail and the curvature of the forgings.....	196
10.2.13.2.	Overfilling hammers.....	198
10.2.13.3.	Spiral-shaped surface of forgings.....	199
10.3.	Faults resulting from heat treatment.....	201
10.3.1.	Incorrect heating.....	201
10.3.2.	Irregular structure after soft annealing.....	204
10.3.3.	Incorrect hardness after soft annealing.....	204
10.3.4.	Cracks due to heat treatment.....	205
10.3.5.	Curvature of forged bars after soft annealing.....	206
10.3.6.	Unmarked semi-finished products and forgings.....	207