

HANDBOOK OF

POWER, UTILITY

AND BOILER

Terms and Phrases

Sixth Edition

©Copyright 2001 by
American Boiler Manufacturers Association, 4001 North 9th Street, Suite 226, Arlington, VA 22203
All Rights Reserved



TABLE OF CONTENTS

PAGE	ALPHABETICAL LISTING OF TERMS BY SECTION LOCATION
------	---

25	Fuels
37	Fuel-Preparation Equipment
43	Fuel Burning Equipment
57	Combustion and Emissions
67	Ash and Slag
73	Furnace
79	Boiler and General Terms
101	Water and Steam
109	Superheaters, Economizers, Airheaters
113	Drafts, Fans and Stacks
119	Boiler Emission Control Equipment
141	Boiler and Fuel System Controls
151	Legislative and Regulatory Terms

F

OREWORD

This is the sixth edition of a Lexicon containing words commonly used in connection with Boilers and Auxiliary Equipment. It has been divided into major sections, titled as major parts or functions, and arranged in sequence as the fuel or products of combustion pass through a steam generating unit. This has been done to limit, when desirable, the scope of a definition to the subject of the section.

The final section, "Legislative and Regulatory Terms", lists terms, acronyms, and phrases which are popularly used at the time of publishing. However, these could change over a period of time.

The difficulties of obtaining 100% accuracy and coverage in such a Lexicon are recognized by the Lexicon Task Force. This edition contains some revisions and needed additions to reflect current industry practice. Constructive criticisms and suggestions for revisions in, or additions to, future editions will be welcome. This Lexicon is not to be considered as a purchasing specification.

The Task Force gratefully acknowledges the help and suggestions in the preparation of this Lexicon received from individuals and organizations in and outside the boiler industry.

American Boiler Manufacturers Association
4001 North 9th Street, Suite 226
Arlington, Virginia 22203

The American Boiler Manufacturers Association wishes to express its appreciation for the Task Force work in updating this Lexicon. Their dedication, while representing the interests of the Utility Boiler, Industrial Systems, Commercial Systems and Burner product market groups, brought this publication to the present perceived level of the industry.



BMA LEXICON INDEX

Abatement (Part 1)	119	Agglomerating	25
Abrasion-Flex (Part 3)	129	Agglomeration (Part 4)	133
Abrasion-Surface (Part 3)	129	Agglutinating	25
Absolute Humidity	57	Air	57
Absolute Pressure	79	Air Atomizing Oil Burner (Part 2)	45
Absorption (Part 1)	119	Air Binding	101
Absorption (Part 4)	133	Air Blast	113
Absorption with Chemical Reaction (Part 4)	133	Air Classification	37
Accumulator (Steam)	79	Air-Cooled Wall	73
ACF	57	Air Deficiency	57
ACFM	47	Air Distributor (Part 3)	50
Acid Cleaning	79	Air Dried	25
Acid Dew Point (Part 4)	133	Air, Dry (Part 3)	129
Acid Sludge	25	Air-Free	101
Acidity	101	Air-Fuel Ratio	57
Activated Carbon (Part 1)	119	Air Infiltration	113
Actual Cubic Feet	57	Air Moisture	57
Actual Volume	57	Air Monitoring (Part 1)	120
Actuating Signal	141	Air Nozzle (Part 2)	45
A/D Converter	141	Air Pollution (Part 1)	120
Additive (Part 4)	133	Air Port (Part 1)	43
Adiabatic Saturation (Part 4)	133	Air Preheater or Airheater	109
Adiabatic Temperature	57	Air-Puff Blower	67
Adjustable Venturi Throat (Part 4)	133	Air Purge	58, 79
Adsorption (Part 1)	119	Air Quality Control Region (Part 1)	120
Aeration	37	Air Quality Criteria (Part 1)	120
Aeration (Part 1)	119	Air Quality Standards (Part 1)	120
Aerosol (Part 1)	120	Air Resistance	113
Aerosol (Part 4)	133	Air, Saturated	113
Afterburner (Part 1)	120	Air Seal	37
Aftercooler	79	Air-Swept Pulverizers	37
		Air-To-Cloth Ratio (Part 3)	129

8

Air-Transport System	37	Auxiliary Air	58
Air Vent	79	Available Draft	113
Alarm	141	Availability Factor	79
Alkalinity	101	Axial Fan	113
Ambient Air	58	Bacharach Number	58
Ambient Temperature	79	Background Level (Part 1)	120
Analog Signal	141	Backing Ring	80
Analysis, Proximate	25	Backwash (Part 3)	129
Analysis, Ultimate	25	Baffle	80
Anemometer (Part 3)	129	Baffle (Part 1)	120
Anthracite	25	Bag	80
Anti-Degradation (Part 1)	120	Bag (Part 3)	129
Aquifer (Part 1)	120	Bagasse	25
ARC (Part 2)	125	Bag Filter	67
Arch Bar	79	Baghouse (Part 1)	120
Arch Firing (Part 1)	43	Balanced Draft	113
Arch-Furnace	73	Banking	58
Arch-Roof	73	Banking (Live)	58
Area Source (Part 1)	120	Baretube Wall	73
Armored Wall	73	Bark	25
As-Fired Fuel	25	Barley	26
Ash	25, 67	Barometric Damper	113
Ash Bed	67	Barometric Pressure	113
Ash-Free Basis	25	Barrier Valve (Part 1)	43
Ash Fusion (Temperatures)	67	Base/Acid Ratio	67
Ash Gate	67	Base Load	80
Ash Pit	67	Batch Cleaned (Part 3)	129
Ash Sluice	67	Battery Setting	80
ASME Boiler and Pressure Vessel Code	79	Beaded Tube-End	80
Aspect Ratio	113	Bed Material (Part 3)	50
Aspirating Air	79	Bed Moisture	26
Aspirating Burner (Part 2)	45	Bee Hive Coke	26
Atmosphere (Part 1)	120	Belled Tube-End	80
Atmospheric Pressure	58, 113	Bellows Seal	80
Atmospheric Pressure (Part 3)	129	Bias	141
Atomizer (Part 2)	45	Bin System	37
Attemperator	109	Biomass	26
Automatic Controller	141	Bird Nesting	67
Automatic Lighter or Igniter (Part 2)	45	Bituminous Coal	26

Black Liquor	26	Boss	83
Blank Head	80	Bottom Air Admission (Part 4)	51
Blast Furnace Gas	26	Breeching	114
Blast Gate (Part 3)	129	Bridgewall	73
Blind Nipple	80	Bridging	67
Blinding (Blinded) (Part 3)	129	British Thermal Unit (Btu)	26
Blister	80	Broken Coal	26
Block	73	Broken Twill (Part 3)	129
Blowdown	101	Brown Coal	26
Blow Down Separator	80	Bubble	101
Blow Down Valve	80	Bubbling Bed (Part 3)	50
Blower	37, 113	Buckstay	83
Blowhole	58	Buckstay Spacer	83
Blow-Off Valve	80	Buckwheat	27
Blow Tank (Part 1)	43	Bug Dust	27
Blowtorch Action	58	Bulge	83
Bluff Body (Part 2)	45	Bulked Yarn (Part 3)	130
Boiler	80	Bump	83
Boiler Assembler	82	Bunker C Oil	27
Boiler Blow-Off Piping	82	Burner (Part 2)	45
Boiler Blow-Off Tank	82	Burner Windbox (Part 2)	46
Boiler Convection Bank	82	Burner Windbox Pressure (Part 2)	46
Boiler Dry-Back	82	Bus Section (Part 2)	125
Boiler Efficiency	82	Buttstrap	83
Boiler Erector	82	Bypass	83
Boiler, High-Pressure	82	Bypass Temperature Control	109
Boiler, High-Temperature Hot Water	82	By-Product Coke	27
Boiler Horsepower	82	Caking	27
Boiler Layup	83	Calcium Sulfate (Part 4)	134
Boiler, Low-Pressure Hot-Water and Low-Pressure Steam	83	Calcium Sulfite (Part 4)	134
Boiler Slag Screen	83	Calorie	27
Boiler Water	101	Calorific Value	27
Boiler Wet-Back	83	Calorimeter	27
Boiling Out	101	Capacity	84
Bond	73	Capacity Factor	84
Bone Coal	26	Carbon (Element)	27
Booster Fan	113	Carbon Conversion Efficiency	58
Booster Fan (Part 4)	134	Carbonization	27
		Carbon Loss	58

10

Carbon Residue	27	Coal Gas	28
Carryover	101	Coal-Oil Mixtures (COM)	28
Casing	84	Coal Spreader (Part 2)	46
Central Station	84	Coal Tar	28
Centrifugal Collector (Part 1)	121	Co-Current (Part 4)	134
Centrifugal Fan	114	Cogeneration	84
Chain Grate Stoker (Part 4)	51	Coke	28
Chain Weave (Part 3)	130	Coke Breeze	28
Chamber (Part 2)	125	Coke Oven Gas	28
Char	68	Coke Oven Tar	28
Checker Work	73	Coking	28
Chemical Feed Pipe	84	Coking Plate (Part 4)	51
Chevron Mist Eliminator (Part 4)	134	Coking Stoker (Part 4)	52
Chimney	114	Collecting System (Part 2)	125
Chimney Core	114	Collection Efficiency (Part 2)	125
Chimney Lining	114	Collection Efficiency (Part 4)	134
Cinder	68	Colloid	102
Cinder-Catcher	68	Colloidal Fuel	28
Cinder-Return	68	Combination Burner (Part 2)	46
Circular Burner (Part 2)	46	Combustible	28
Circulating Bed (Part 3)	50	Combustible In Ash	58
Circulation	101	Combustible Loss	58
Circulation Ratio	102	Combustion	59
Circulator	84	Combustion Chamber	74
Clarification (Part 1)	121	Combustion Efficiency	59
Clarifier (Part 1)	121	Combustion (Flame) Safeguard	141
Class	27	Combustion Rate	59
Classification	27	Combustion Safety Control-Programming Type	142
Classifier	37	Commercial Boiler	84
Cleanout Door	84	Compaction (Part 1)	121
Clinker	68	Compartment (Part 4)	52
Clinker Chill	73	Complete Combustion	59
Clinker Grinder Stoker (Part 4)	51	Concentration	102
Clinkering	68	Condensate	102
Closed Fire Room System	114	Condensation (Part 3)	130
Cloth (Part 3)	130	Condensation Nuclei (Part 4)	134
Cloth Weight (Part 3)	130	Condensible/Condensable (Part 4)	134
Coal	28	Conduction	84
Coal Burner (Part 2)	46		

Conductivity	84, 102	Cyclone Collector (Part 1)	121
Conservation (Part 1)	121	Cyclone Furnace	74
Constant Ignition (Part 2)	46	Cyclonic Scrubber (Part 4)	134
Continuous Blowdown	102	D/A Converter	142
Continuous Igniter (Part 2)	46	Damper	85
Continuous Tube Element	109	Damper Control	109
Control	84	Damper Loss	114
Control Element	142	Dashpot Relay	142
Control Equipment (Part 2)	126	Dead-End Tube	85
Control, Limit	142	Dead Plate (Part 4)	52
Control, Safety	142	Deaeration	102
Control, Safety Combustion	142	Deflector (Part 1)	44
Control Unit	142	Degasification	102
Control Valve	59	Degree of Superheat	102
Convection	85	Delayed Combustion	59
Convection Heating Surface	74	Demineralizer	102
Core	85	Denier (Part 3)	130
Corner Firing (Part 1)	44	Derivative (Rate) Controller	142
Corrosion	102	Design Load	85
Count (Part 3)	130	Design Pressure	85
Counter-Current (Part 4)	134	Design Steam Temperature	85
Cover (Part 3)	130	De-Slag	68
Cracked Residue	28	Desuperheater	109
Cracking	59	Dew Point	59
Cricket	37	Dewatering (Part 4)	135
Criteria (Part 1)	121	Diagonal Stay	86
Critical Pressure and Critical Temperature ..	85	Diaphragm	86
Cross Box	85	Difference	142
Cross-Flow Scrubber (Part 4)	134	Differential	142
Cross Limiting	142	Diffuser (Part 2)	46
Cross-Tube Burner (Part 2)	46	Diffusion (Part 4)	135
Crowfoot Satin (Part 3)	130	Digital Control	142
Crown Sheet	85	Digital Word	143
Crude Oil	28	Dimensional Stability (Part 3)	130
Crusher	37	Direct Digital Control	143
Culm	28	Direct-Fired Boiler	86
Cup Cap	85	Direct-Fired Circulating System	37
Cyclone	37, 85	Discharge Tube	86
Cyclone Air Lock (Part 1)	44	Disengaging Surface	102