

China Steel Chemical Corp.

November, 2021



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The Brief Introduction to CSCC

Chronology of Major Events

1. CSCC established in February 1989.
2. Plants completed during 1991~1993.
3. CSCC IPO listed in Taiwan in NovemAber, 1998
4. CSCC was awarded “Industrial Excellence Award “ and “National Outstanding SMES Award” in 2001.
5. CSCC achieved OHSAS 18001 certification in 2002.
6. CSCC achieved CNLA in 2002.
7. The Light Oil Distillation plant phase 2 completed in 2010.
8. CSCC achieved AEO in 2002.



The Brief Introduction to CSCC

Chronology of Major Events

9. Obtained the CNS15506 certification in April 2012.
10. Obtained ISO50001 certification in July 2013.
11. Obtained IATF 16949 certification in 2018.
12. The line of Green Mesophase Powder Plant reaching capacity to 7,500 MT/YR in 2019.
13. Mesophase Powder Plant go into operation in June 2019.
14. Received the Sustainable Elite Award issued by SGS, and 2019 Corporate Sustainability Award - Corporate Comprehensive Performance, and 2019 Taiwan Sustainable Enterprise Comprehensive Performance Award and Corporate Sustainability Report - Gold Award from TCSA in November 2019.
15. Received the Corporate Sustainability Report - Gold Award from TCSA in November 2020.



The Brief Introduction to CSCC

The Structure of Shareholder

unit : per thousand stocks

Major shareholder	Shares	Percentages
China Steel Corp.	68,787	29.04%
Fubon Life Insurance Co., Ltd.	16,578	7.00%
International CSRC Investment Holdings Co., Ltd.	11,759	4.96%
Cathay Life Insurance Co., Ltd.	6,331	2.67%
Ever Wealthy International Corp.	4,753	2.01%

As of : Aug. , 2021



The Brief Introduction to CSCC

Table of academic degree in CSCC's employees

Academic Degree	No.	Percentages
Ph.D.	9	3%
Master's Degree	81	27%
Bachelor's Degree	142	48%
Junior College and Senior High School	67	22%
Total	299	100%

As of : Aug., 2021



The Brief Introduction to CSCC

unit : ten thousand metric tons

	2017	2018	2019	2020	2021/1~9
Coal Tar	25.3	25.8	25.5	26.0	19.1
Light Oil	10.1	11.7	12.4	11.6	8.6



Sales Revenue breakdown by products

	2019	2020	2021 1~9
Light Oil	29%	28%	32%
Benzene	24%	24%	27%
Coal Tar	47%	47%	42%
Creosote Oils	26%	26%	23%
Soft Pitch	12%	13%	12%
Naphthalene	7%	7%	5%
Carbon Material	5%	4%	5%
Coke Breeze	7%	9%	8%
Tranding	11%	10%	12%



The Brief Introduction to CSCC

Unit: NT\$ thousands

2019	Q1	Q2	Q3	Q4	Total
Revenue	2,019,127	1,865,753	2,159,028	1,498,082	7,541,990
Operating Income	430,394	366,659	446,611	198,729	1,442,393
Net income before tax	477,480	406,381	501,851	209,613	1,595,325
WTI Oil Price	55	60	56	57	57

2020	Q1	Q2	Q3	Q4	Total
Revenue	1,599,177	1,149,670	1,161,772	1,453,155	5,363,774
Operating Income	229,003	145,622	154,805	240,469	769,899
Net income before tax	231,660	191,736	195,262	232,361	851,019
WTI Oil Price	46	27	41	42	39

2021	Q1	Q2	Q3	Total
Revenue	1,668,856	1,951,885	2,295,800	5,916,541
Operating Income	262,559	305,591	371,083	939,233
Net income before tax	285,695	340,556	404,094	1,030,345
WTI Oil Price	58	66	71	65

- ◆ Monthly information for October 2021
 - Revenue - \$655,718 thousand
 - Operating Income - 84,987 thousand
 - Net income before tax - 91,226 thousand
 (Same as information on MPOS.)



The Brief Introduction to CSCC

Unit: NT\$ millions

	2017	2018	2019	2020	2021/1~9
Revenue	6,242	8,560	7,542	5,364	5,917
Net income after tax	1,208	1,516	1,298	708	853
EPS(NT\$)	5	6.5	5.57	3.09	3.68

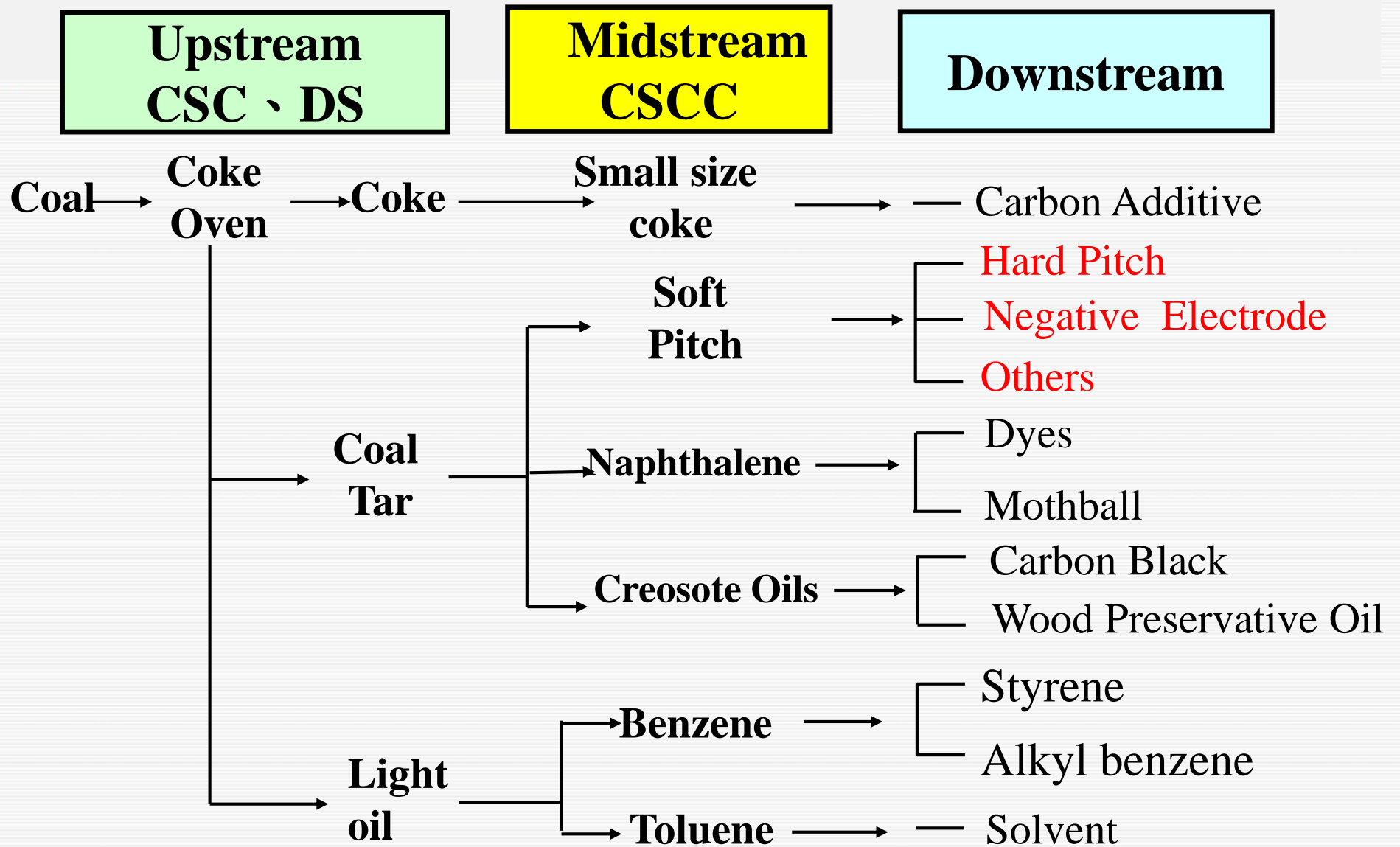


Dividend Payout

	2016	2017	2018	2019	2020
EPS	4.45	5.0	6.5	5.57	3.09
Cash Div.	4.5	4.6	5.3	5.0	2.8
Stock Div.	0	0	0	0	0

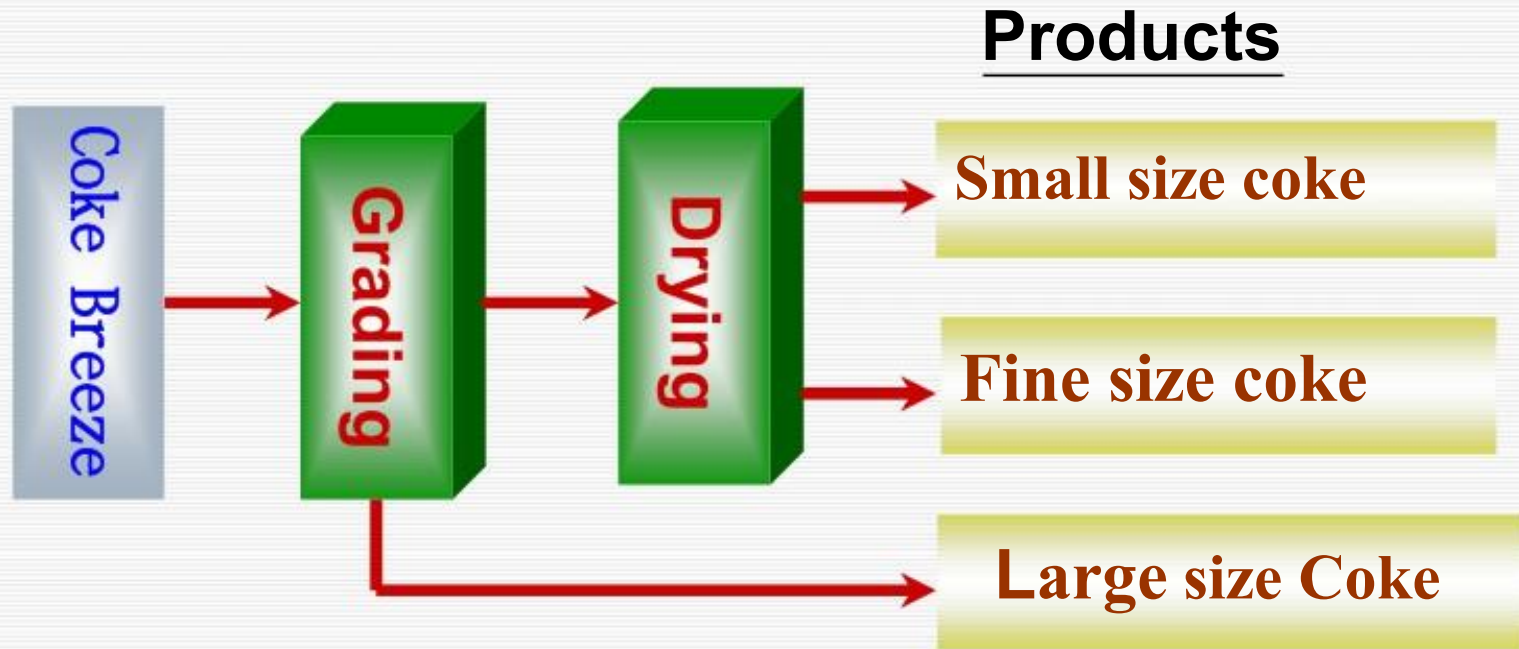


The Relating Product Map of Coal Chemical Industries



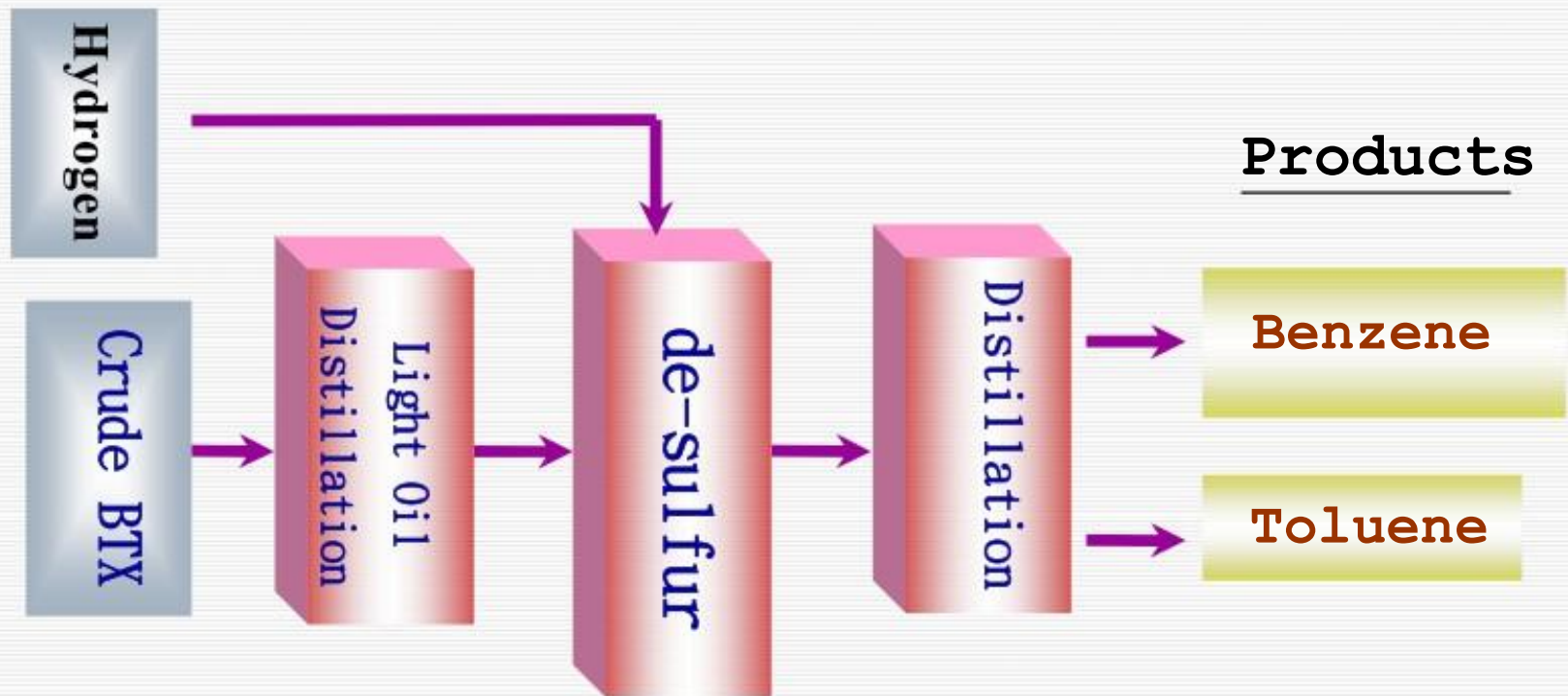
The Relating Product Map of Coal Chemical Industries

The Process of the Coke Breeze Plant



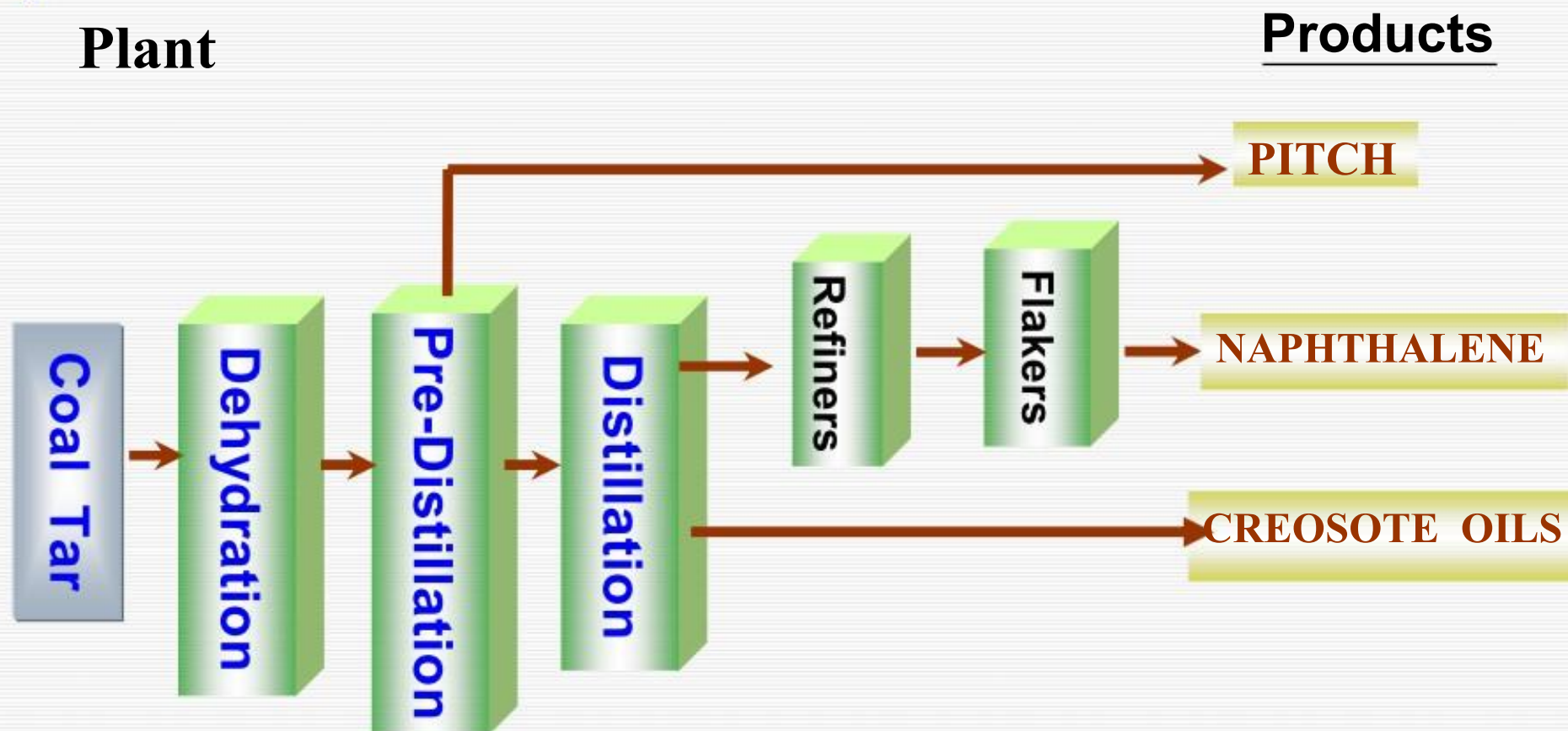
The Relating Product Map of Coal Chemical Industries

The Process of the Light Oil Distillation Plant



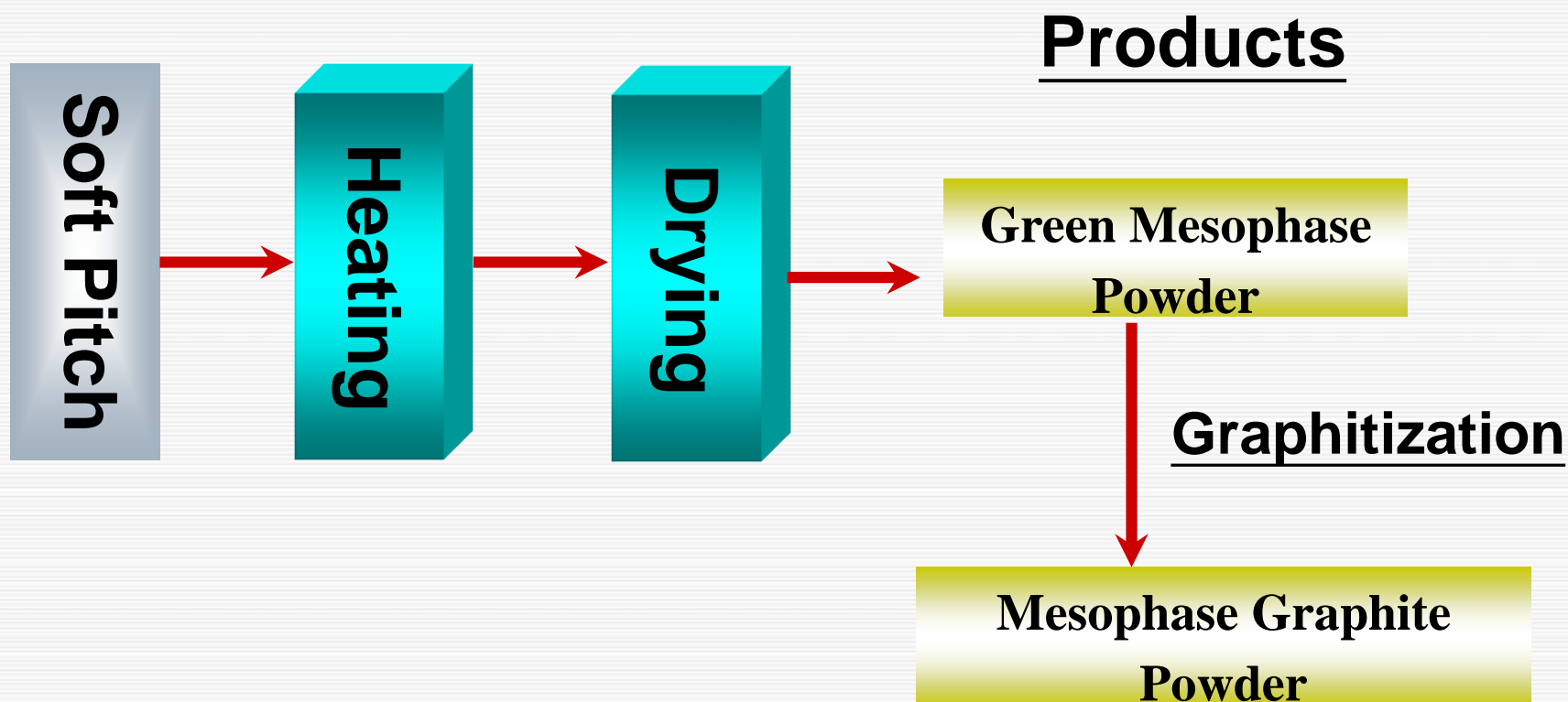
The Relating Product Map of Coal Chemical Industries

The Process of the Coal Tar Distillation Plant

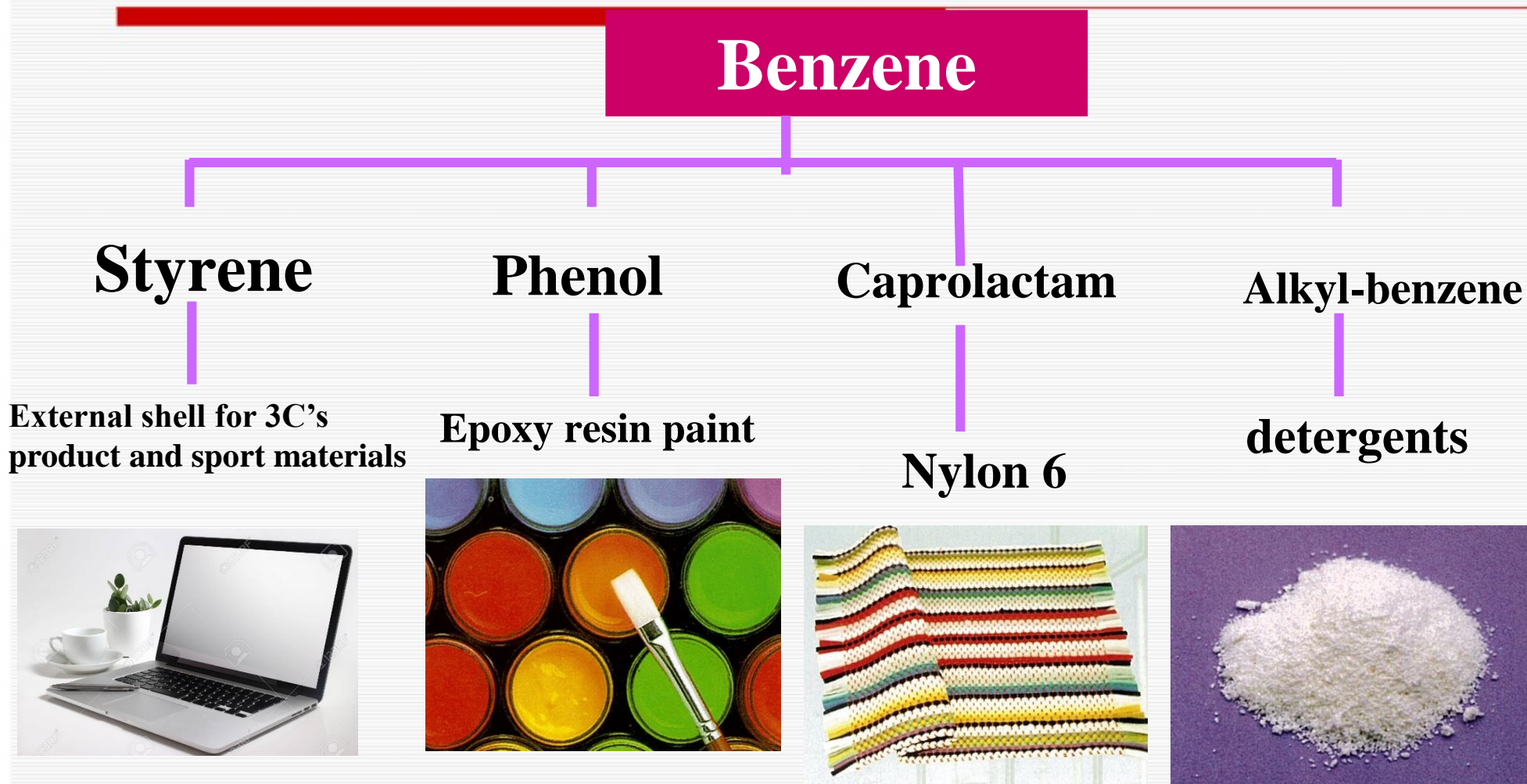


The Relating Product Map of Coal Chemical Industries

✚ The Process of the Green Mesophase Powder plant



The Appliance of Benzene



The Appliance of Creosote oils

Creosote oils

**Carbon
black**



Wood preservative oil



Wash oil

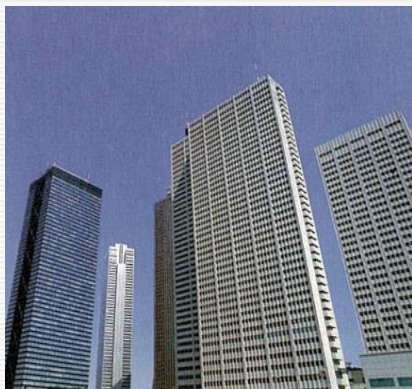


The Appliance of Naphthalene

Naphthalene

Sulfonated naphthalene formaldehyde condensates

Water-reducing admixture



B-naphthol, Tobias acid, J-acid

Dyestuffs pigment



Mothballs



Phthalic anhydride (PA)



The Appliance of Soft Pitch

Soft Pitch

Primary
electrode rod



Water and rust
proofing materials



Green Mesophase
Powder

Mesophase
Graphite Powder

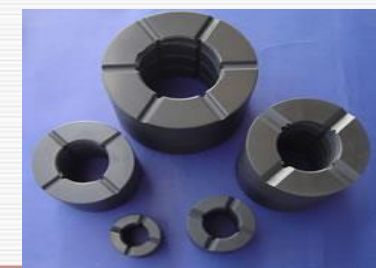
Lithium Ion
Battery



Active Carbon for
Supercapacitor

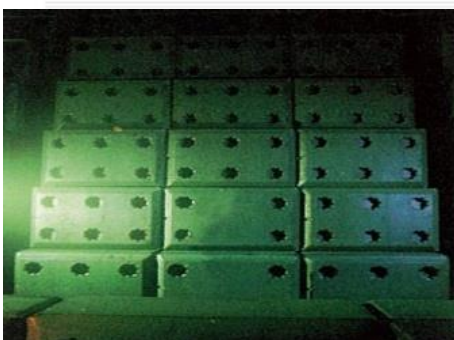


Isotropic Graphite



Hard Pitch

Electrode binder



Roofing Pitch



CSCC's Meso-Graphite

■ Application: High Energy & Power density in LIB

Energy Density(Wh/Kg): Low  High

Power Density(W/Kg): Strong  Low

MG10
MG08

MG11
FMGP

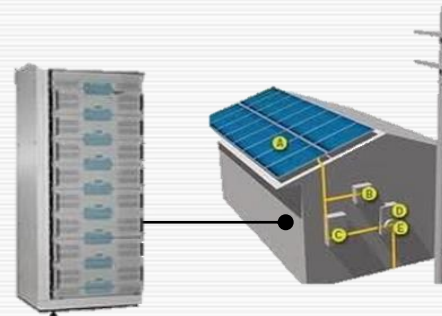
MG12
MGP

MG13

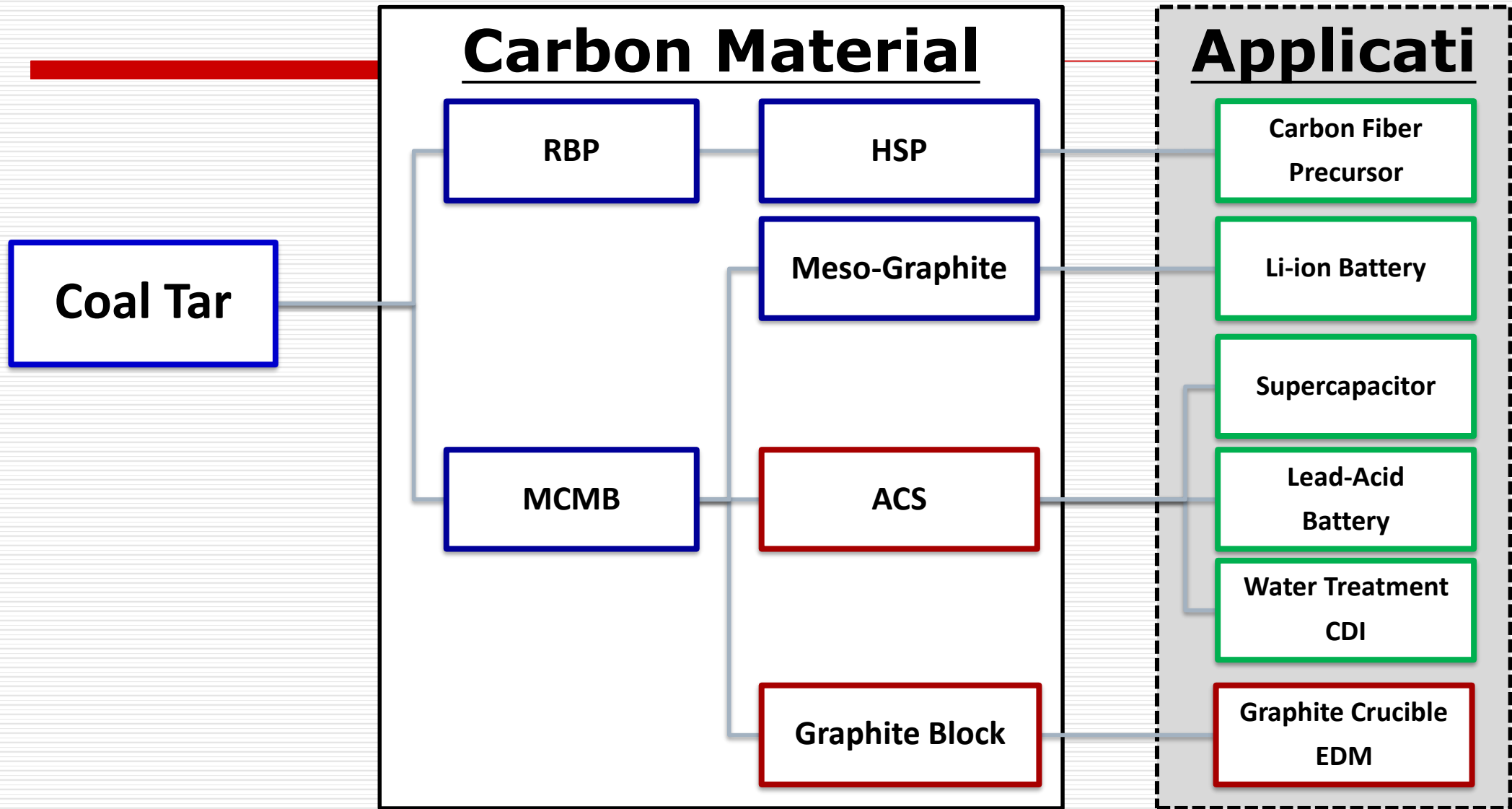
PT/HEV

EV/ESS

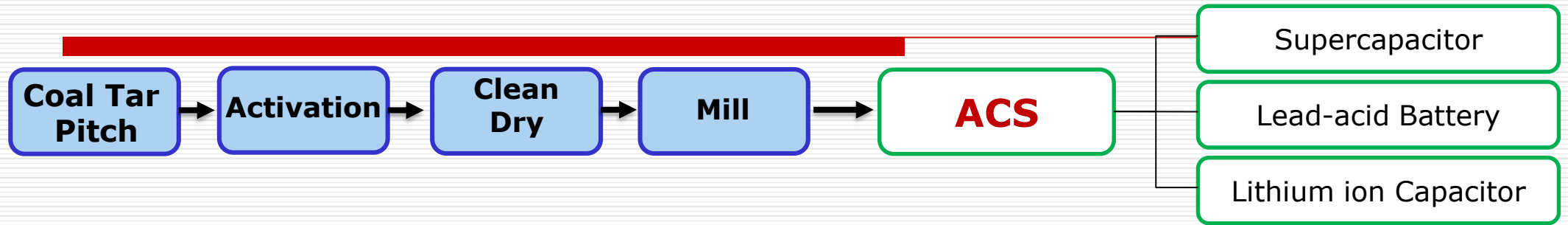
Tablets/3C



New Product Development Architecture



Advanced Carbon for Supercapacitors (ACS)



Features of ACS

- ✓ High Surface Area
- ✓ High Capacitance
- ✓ High Quality

- ACS annual production capacity is 45MT/year, and the second production line is planned to increase total annual production capacity to 90MT/year ◦

Applications of Supercapacitors

Light Rail Transit



Wind turbine

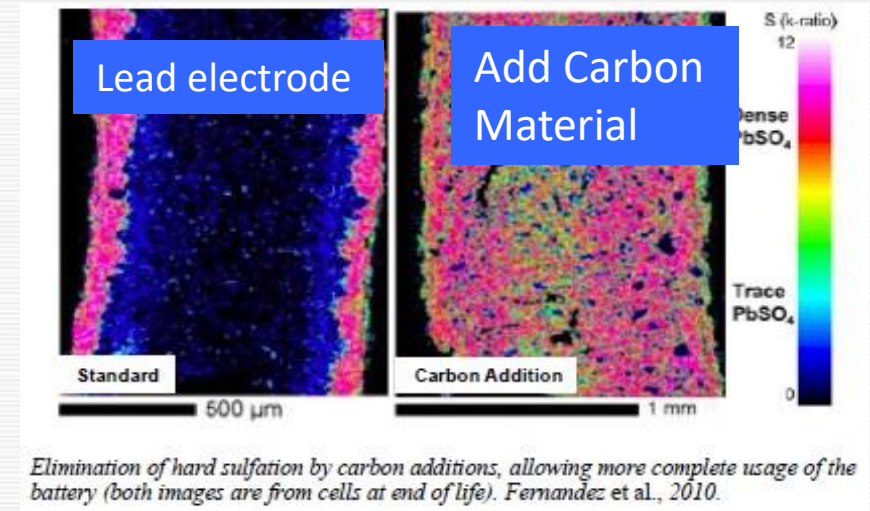
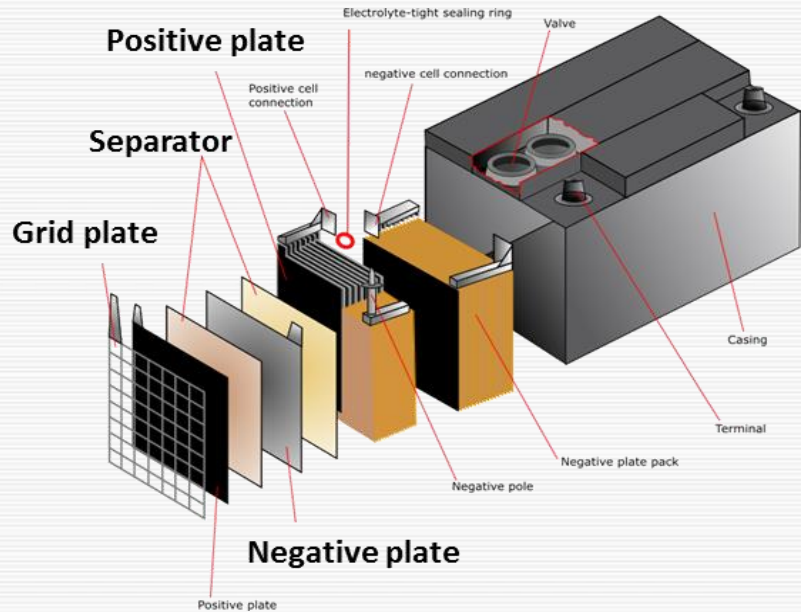


Introduction of Advanced Lead-Acid Battery

Advantages of addition activated carbon into LAB

1. Increasing conductivity
2. Improving the uniformity of Pb/PbSO₄
3. Capacitance effect
4. Low amount of maintenance
5. Extending the life of LAB

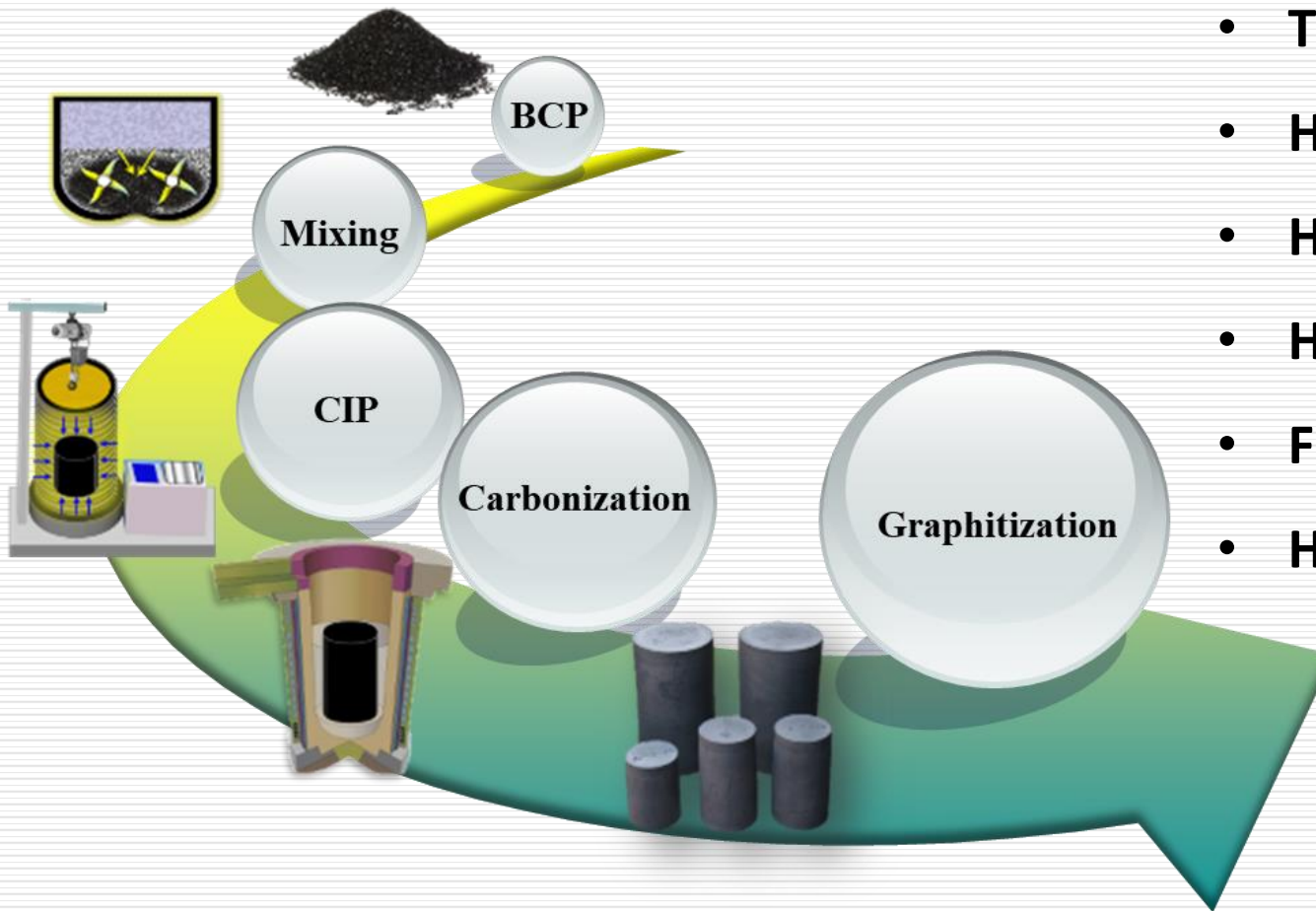
Structure of Lead-Acid Battery



Source: Pavlov D., Lead-acid Batteries: Science and Technology. Elsevier, 2011.



Graphite Block

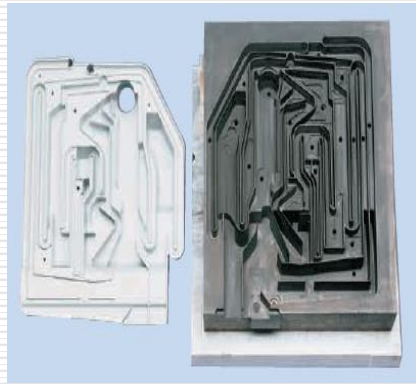


- Thermal and Chemical Resistance
- High Thermal Conductivity
- High Purity
- High Density
- Fine Structure
- Homogeneous

Graphite Block Application

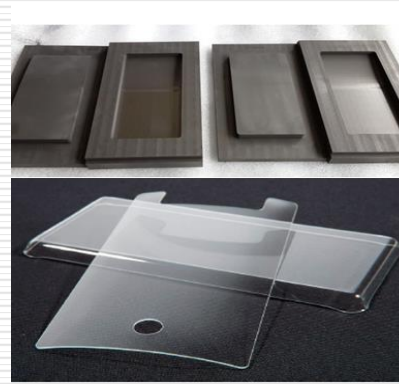


Continuous Casting



EDM

Graphite Block for large Size (>30cm) EDM continuously study high-end product.



3D Glass Mold

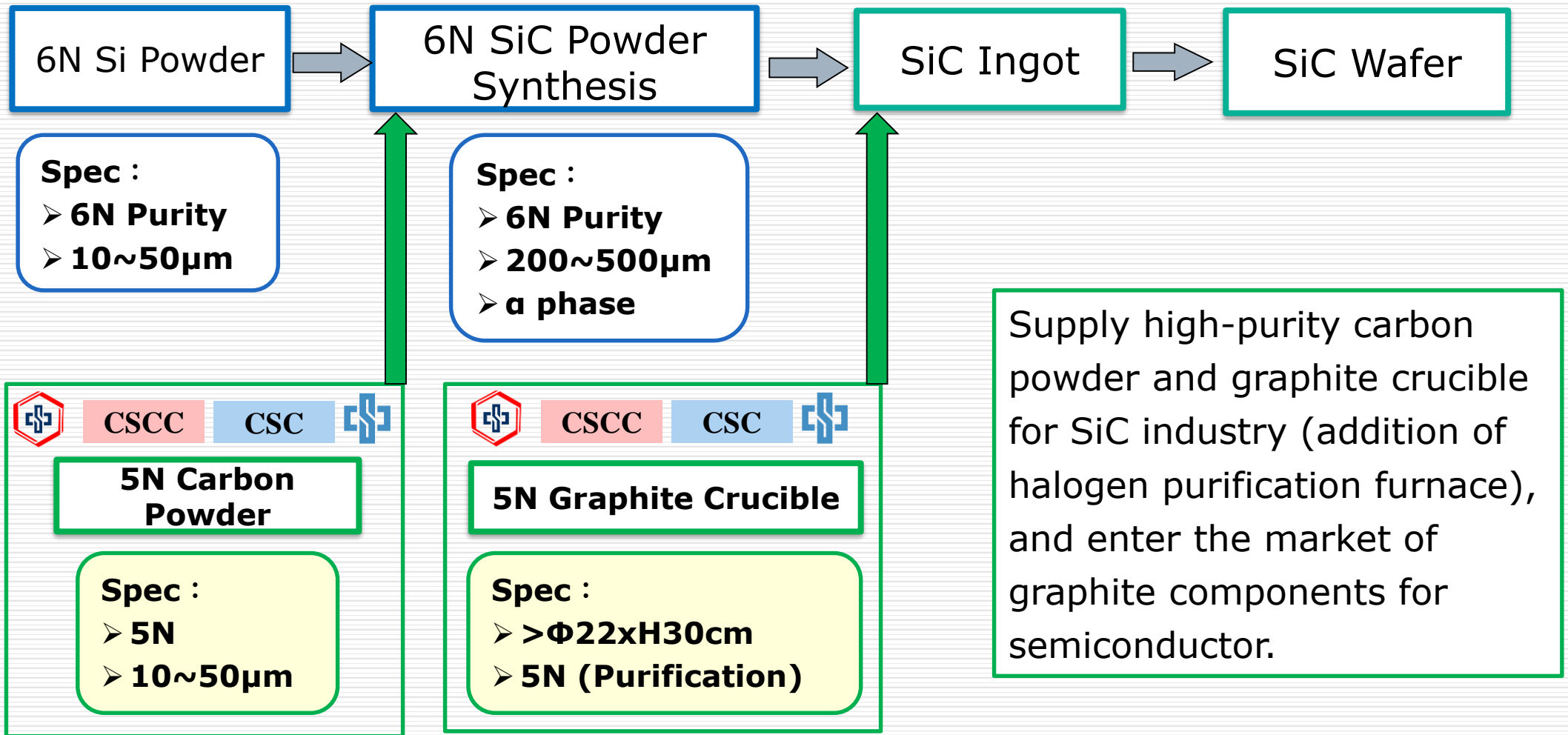
Being verified by customers.



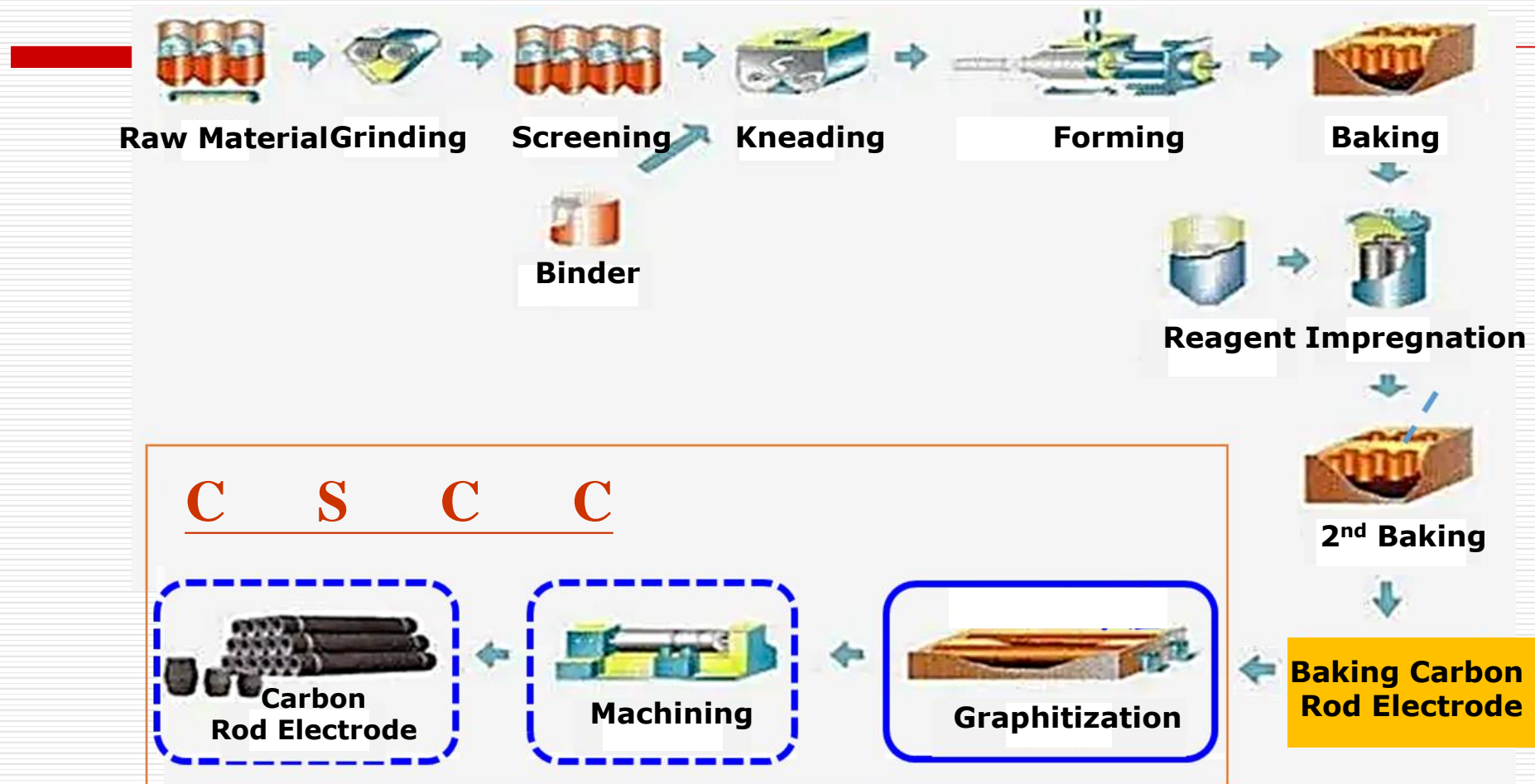
Crucibles

Graphite crucible for SiC industry are being verified by customers.

Carbon Material for Compound Semiconductor (SiC)



Graphite Rod Electrode Manufacturing Flow



- Introduce roasted carbon rods for graphitization and machining for home market.



Q&A

