

Mechanical Recycling of Waste Polymers

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Abstract

Plastics started out as a superb industrial innovation and quickly dominated many applications because different types of plastics could be developed to maximize a variety of properties. These properties allowed plastics to replace many other conventional materials in numerous market segments. However, such growth rate had consequences, resulting in the need for recycling to address the accumulating waste. Poor life-cycle considerations of the past have resulted in substantial complications of the present.

This report returns to the concept of mechanical recycling of individual plastic waste streams, in which the following processes are examined:

- Chinese HDPE mechanical recycling process
- Chinese PP mechanical recycling process
- Chinese PET mechanical recycling process
- QCP HDPE mechanical recycling process
- QCP PP mechanical recycling process
- A bottle grade PET mechanical recycling process

Contents

1	Introduction	7
2	Summary	8
3	Industry status	11
4	Technology	12
	Plastic recycling	12
	PET mechanical recycling	13
	PE and PP mechanical recycling	17
5	Chinese polymer mechanical recycling process	20
	Chinese HDPE mechanical recycling process	20
	Process description	20
	Process discussion	23
	Economic analysis	24
	Capital costs	24
	Variable costs	25
	Production costs	26
	Chinese PP mechanical recycling process	27
	Process description	28
	Process discussion	30
	Economic analysis	31
	Capital costs	31
	Variable costs	32
	Production costs	33
	Chinese PET mechanical recycling process	34
	Process description	35
	Process discussion	37
	Economic analysis	38
	Capital costs	38
	Variable costs	40
	Production costs	41
6	QCP polyolefins mechanical recycling process	43
	Process description	44
	Process discussion	47
	Economic analysis	48
	Capital costs	48
	Variable costs for HDPE campaign	49
	Production costs for HDPE campaign	49
	Variable costs for PP campaign	50
	Production costs for PP campaign	51
7	Mechanical recycling of post-consumer PET bales to bottle-grade rPET	53
	Introduction	53
	Process description	53
	Section 100—PET bottle washing line front end	59
	Section 200—PET bottle washing line back end	59
	Section 300—Decontamination and solid-state polycondensation	60
	Process discussion	60
	Improvements in PET bottle recycling process	60
	Plant design capacity	61
	Raw material	62
	Yields	63

Food-grade rPET specification	63
Bale dewirer and bale breaker	65
Delabelling and bottle prewash	65
Size reduction	66
Flake wash	66
Sorting	66
Manual sorting	66
Automatic nonoptical sorting	66
Decontamination processes for food-grade rPET	71
Solid-state polycondensation for bottle-grade rPET	73
Extrusion and pelletizing system	74
Environmental	75
Cost estimate	76
Capital costs	76
Production costs	80
Sensitivity analysis	82
Appendix A—Patent summaries	84
Appendix B—Design and cost basis	110
Appendix C—Cited references	116
Appendix D—Process flow diagrams	123

Tables

Table 4.1 PET model bale specification	13
Table 4.2 Minimum requirement for rPET for BtoB	15
Table 5.1 Chinese HDPE mechanical recycling process—Design assumptions	21
Table 5.2 Chinese HDPE mechanical recycling process—Major stream flows	22
Table 5.3 Chinese HDPE mechanical recycling process—Major equipment	23
Table 5.4 Mainland China HDPE mechanical recycling process—Total capital investment	24
Table 5.5 Mainland China HDPE mechanical recycling process—Capital investment by section	25
Table 5.6 Mainland China HDPE mechanical recycling process—Variable costs	26
Table 5.7 Mainland China HDPE mechanical recycling process—Production costs	27
Table 5.8 Mainland China PP mechanical recycling process—Design assumptions	28
Table 5.9 Mainland China PP mechanical recycling process—Major stream flows	29
Table 5.10 Mainland China PP mechanical recycling process—Major equipment	30
Table 5.11 Mainland China PP mechanical recycling process—Total capital investment	31
Table 5.12 Mainland China PP mechanical recycling process—Capital investment by section	32
Table 5.13 Mainland China PP mechanical recycling process—Variable costs	33
Table 5.14 Mainland China PP mechanical recycling process—Production costs	34
Table 5.15 Mainland China PET mechanical recycling process—Design assumptions	35
Table 5.16 Mainland China PET mechanical recycling process—Major stream flows	36
Table 5.17 Mainland China PET mechanical recycling process—Major equipment	37
Table 5.18 Mainland China PET mechanical recycling process—Total capital investment	39
Table 5.19 Mainland China PET mechanical recycling process—Capital investment by section	40
Table 5.20 Mainland China PET mechanical recycling process—Variable costs	41
Table 5.21 Mainland China PET mechanical recycling process—Production costs	42
Table 6.1 QCP polyolefin mechanical recycling process—Design assumptions	45
Table 6.2 QCP polyolefin mechanical recycling process—Major stream flows	46
Table 7.1 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets— Design bases	54
Table 7.2 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets— Major stream flow	55
Table 7.3 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets— Major equipment	56
Table 7.4 CarbonLite's rPET plants	62
Table 7.5 PET model bale specification	62
Table 7.6 Typical brand owner specifications for rPET	71
Table 7.7 Summary of major waste streams	76
Table 7.8 Carbon dioxide emission and water consumption	76
Table 7.9 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets—Total capital investment	79
Table 7.10 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets—Capital investment by section	80
Table 7.11 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets— Variable costs	81
Table 7.12 Mechanical recycling of post-consumer PET bales to bottle-grade rPET pellets— Production costs	82

Figures

Figure 2.1 Mechanical recycling—Capital cost comparison	9
Figure 2.2 Mechanical recycling—Production cost comparison	10
Figure 4.1 Polymer recycling categories	12
Figure 7.2 Earlier generation mechanical recycling of post-consumer PET bottles	60
Figure 7.3 Advanced mechanical recycling of post-consumer PET bottles	61
Figure 7.4 Effect of PET bale price on estimated bottle-grade rPET cost	83
Figure 7.5 Effect of rPET yield on estimated bottle-grade rPET cost	83

Appendix D Figures

Figure 5.1 Chinese polyolefin scrap recycling process process flow diagram (Sheet 1 of 2)	124
Figure 5.1 Chinese polyolefin scrap recycling process process flow diagram (Sheet 2 of 2)	125
Figure 5.2 Chinese polyester scrap recycling process process flow diagram (Sheet 1 of 2)	126
Figure 5.2 Chinese polyester scrap recycling process process flow diagram (Sheet 2 of 2)	127
Figure 6.1 QCP Polyolefin scrap recycling process process flow diagram (Sheet 1 of 2)	128
Figure 6.1 QCP Polyolefin scrap recycling process process flow diagram (Sheet 2 of 2)	129
Figure 7.1 Mechanical recycling of post-consumer PET to bottle-grade rPET pellets (Sheet 1 of 3)	130
Figure 7.1 Mechanical recycling of post-consumer PET to bottle-grade rPET pellets (Sheet 2 of 3)	131
Figure 7.1 Mechanical recycling of post-consumer PET to bottle-grade rPET pellets (Sheet 3 of 3)	132

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