Problem	Causes(s)	Possible Solution(s)
Wrinkles	Gauge variation	Adjust die, check die temperature and air ring velocity
	Insufficient cooling	Use refrigerated air/Drop extrusion temperature/Lower frost line
	Bubble instability	Increase the collapsing frame angle
		Eliminate air drafts around the bubble
	Excessive tension	Reduce tension/Reduce speed of downstream rollers
	Die is not level with nip rollers	Level die and/or nip rollers
	Bubble collapsing uneven	Reduce stalk height to minimize bubble movement
	Film collapsed too cold	Reduce nip height/Reduce bubble cooling rate
		Increase melt temperature
	Film collapsed too hot	Increase bubble cooling
		Reduce melt temperature
		Reduce output
	Non-uniform drag resistance in Collapsing frame	Check that collapsing frames are parallel at the exit
		Confirm that the bubble is symmetrical when contacting the collapsing frame
	Rollers out of alignment	Align rollers
	Dirty collapsing frame	Clean the collapsing frame
	Web tension too low	Increase tension

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