CONVERTING QUARTERLY
Web Processing & Finishing Technologies

How to mitigate and avoid costly problems with material splices in the slitting operation

By Wayne Etchells, president, Metlon Corporation

Introduction

Splices that connect lengths of material end-to-end are a double-edged sword for end-user customers and custom slitters. When done effectively, spliced material runs smoothly, and the slitting job remains consistent. When splicing is not done properly, the custom-slitting production run could suffer, compounding the problem down a lengthier manufacturing chain, from customer to customer's customer, rapidly adding to downtime and job costs. Furthermore, when splicing is not done correctly, the incorrectly made splices can cause production problems for the end user, depending on the intended application. The favorable or unfavorable consequences mean that splicing is a high-stakes process.

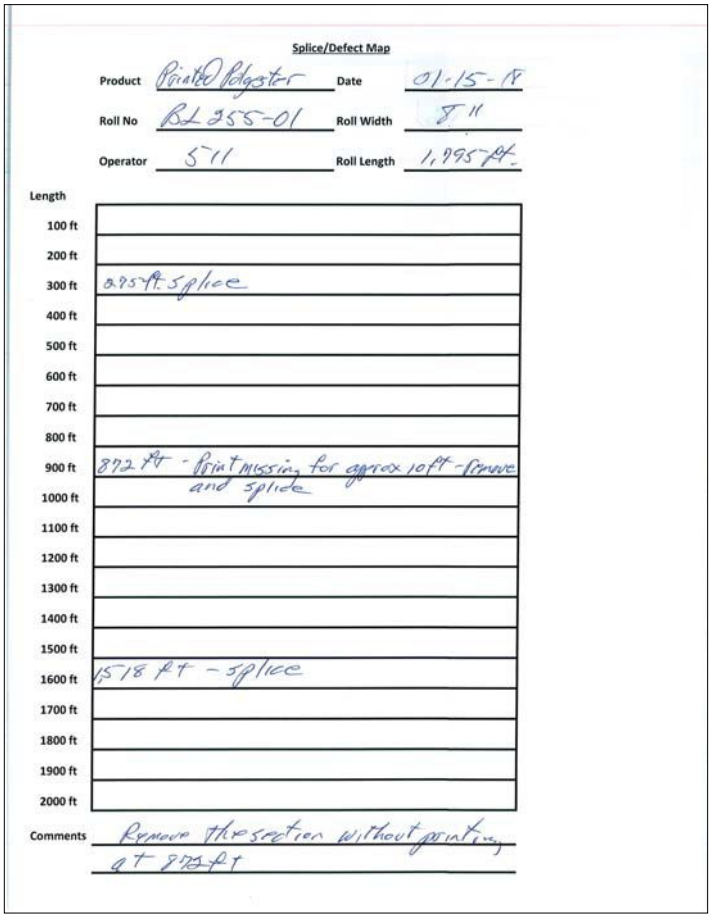
The customer and custom slitter can do several things to avoid unexpected delays, added costs and an unacceptable end product. There also are a few things both *should* do when a problem does arise. The two quick and easy answers to avoid and resolve problems are *documentation* and *communication*. Not surprisingly, these steps pertain to both parties.

For contract converters, the customer or a third party supplies the material to be slit. As a result, the customer dictates how the rolls need to be converted, including how splices in the suppled material, if allowed, are handled.

Documentation is critical

Granted, for a converter, the process of custom slitting frequently includes the managing of a customer's splices. Because the firm specializes in narrow-width slitting while holding very tight tolerances, every detail of the production process is critical, and at times, splices can be among the most critical. Initial discussions or emails often include the topic while preparing specifications for a quote. If the customer doesn't mention it, we do. Questioning job requirements includes a discussion of splices – it's integral to the job specifications in quoting, as well as planning, each job.

This firm follows a rigorous procedure once the parent-roll material arrives, examining the customer's work order and instructions and recording it on its own detailed job specification sheet. This provides documentation for customer service, but more importantly, it's where the contract converter's quality assurance begins.


Splice/Defect Map

Product: Printed Polyester — Date: 01-15-18

Roll No: BL955-01 — Roll Width: 8"

Operator: SH — Roll Length: 1,995 Ft.

Length	
100 ft	
200 ft	
300 ft	895 ft. splice
400 ft	
500 ft	
600 ft	
700 ft	
800 ft	
900 ft	892 Ft - Print missing for approx 10 ft - remove and splice
1000 ft	
1100 ft	
1200 ft	
1300 ft	
1400 ft	
1500 ft	
1600 ft	1578 Ft - splice
1700 ft	
1800 ft	
1900 ft	
2000 ft	

Comments: Remove this section without printing at 892 Ft

FIGURE 1. *Splice/defect map from the customer should include details such as the length where the splice is on each and every roll, and where and how it is marked or flagged.*

Customer documentation must include information about splices when it is important, and it must be very specific (see Figure 1). Details include the length where the splice is on each and every roll, and where and how it is marked or flagged. This

> "Valuable information unfolds during an actual two-way conversation."

information is recorded on the job-specification sheet and shared with every slitter operator and every person working on the job, including the packaging and shipping clerk. A splice map is made for each customer's finished job (see Figure 2). Ideally, the customer should create his or her own splice/defect map, if applicable.

This is helpful to both customer and slitter and keeps both accountable, avoiding problems while limiting downtime and unanticipated costs. Admittedly, converter and customer usually acknowledge that not all splices are created equal. Yet, even if the customer's material is spliced correctly, it is the documentation that makes a critical difference. The machine operator notes where the splices are, watches for existing flags while the job is running and thus knows what needs to be done when encountering the splices.

Communication is essential

While it may seem obvious, communication, in addition to documentation, is essential. Conversations, beyond written instructions, create opportunities to actually fix customers' problems. We then have the ability to remove the defects in a customer's job and replace the splices at no additional charge if we are notified before slitting the rolls. When the customer notifies the slitter about problem splices found at the customer's facility, they can be fixed. Conversation not only solves a problem but also avoids creating new ones.

Valuable information unfolds during an actual two-way conversation: Special instructions. A priority list of contacts. Unexpectedly relevant information. Especially with new customers, this firm welcomes an opportunity to educate customers about the important job requirements that should be on the work order.

Costly domino effect

Conversely, if the customer is unaware and does not document or otherwise communicate the issues at the outset, defects in the customer's material could halt production completely. Count on operators communicating the shutdown quickly, but that marks the beginning of accumulating costs, downtime and wasted

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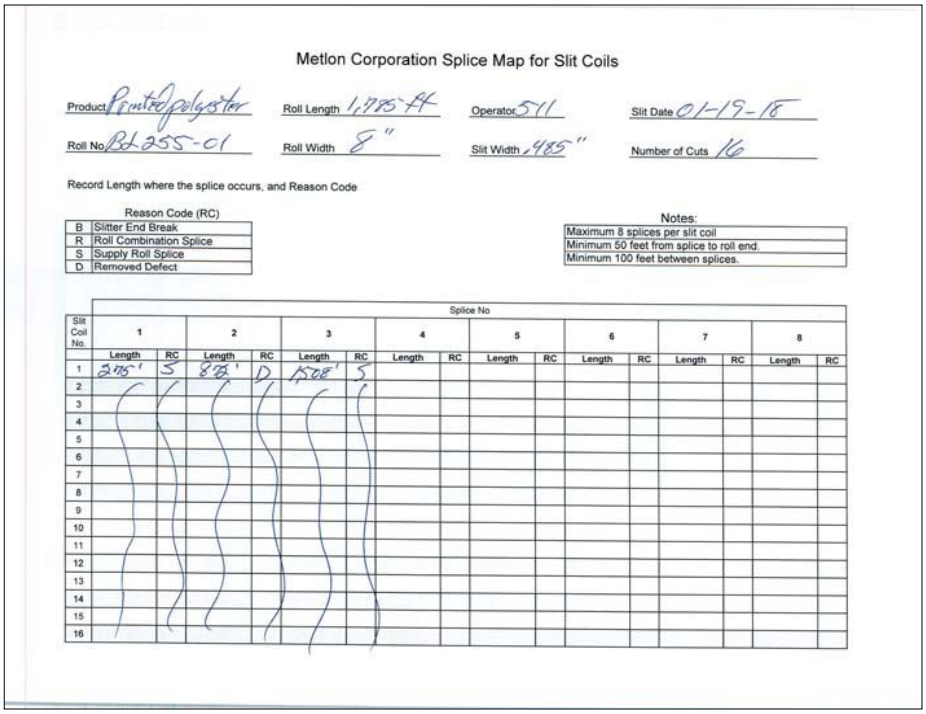
material. We will not continue to run the material without customer approval once defects are found. Jobs may stop for minutes – or days. Of course, this results in added cost to the customer.

Contacting the customer for authorization – or waiting for a third party, such as the customer's supplier – also can be time-consuming and costly. Calculate the slitting operator and equipment downtime, both remaining idle. Consider the missed deadlines and wasted material. Having immediate access to the customer, preferably by phone, can at least curtail the costs of the ticking time clock.



Metlon Corporation Splice Map for Slit Coils

Product Printed polyester | Roll Length 1,775 FT | Operator SH | Slit Date 01-19-18

Roll No. BL255-01 | Roll Width 8" | Slit Width 1.485" | Number of Cuts 16

Record Length where the splice occurs, and Reason Code

Reason Code (RC)	
B	Slitter End Break
R	Roll Combination Splice
S	Supply Roll Splice
D	Removed Defect

Notes:
Maximum 8 splices per slit coil
Minimum 50 feet from splice to roll end.
Minimum 100 feet between splices.

Slit Coil No.	Splice No 1		2		3		4		5		6		7		8	
	Length	RC	Length	RC	Length	RC	Length	RC	Length	RC	Length	RC	Length	RC	Length	RC
1	275'	S	878'	D	1508'	S										
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
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16																

FIGURE 2. *Splice map for slit rolls sent out by the custom slitter is filled out by the operator, by hand, at the slitter/rewinder itself.*

Conclusion

Documentation of job details and instructions, combined with effective communications and personal contact, saves time and money. This ensures the high-quality, custom-slitting job the client ordered, keeping it on time and in budget. These kinds of recommendations truly apply to all material converters, not only those specializing in precision, narrow-width slitting. ■

Wayne Etchells, president of Metlon Corporation (Cranston, RI), studied Business Administration at The University of Rhode Island. He initially joined the company in 1977 in the shipping and receiving dept. and was promoted that same year to the role of production scheduler. By 1980, Etchells had been promoted to production mgr., followed by asst. gm in 1981, gm in 1985, vp/gm in 1989 and exec vp in 1997, before becoming president in 2013. Etchells can be reached at 401-467-3435, fax: 401-467-8720, email: info@metlon.com, www.metlon.comwww.metlon.com.