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TECNOLOGIA DE APLICAÇÃO DE ADESIVOS POLIURETANOS MONO COMPONENTES

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RESUMO: Adesivos poliuretanos mono componentes são usados na produção de produtos estruturais de madeira através do mundo. As técnicas mais avançadas de sistemas de aplicação foram desenvolvidas na Europa e estão sendo lentamente transferidas para as outras regiões. Suíça é o local de nascimento dos adesivos poliuretanos mono componente, onde atualmente a indústria tem entre 15 a 20 anos de experiência na produção de vigas sólidas de madeira emendada dentada, lamelas, vigas laminadas coladas, vigas I e painéis de grande formato. Neste trabalho, a Purbond apresenta informações detalhada sobre a aplicação do poliuretano mono componente para diferentes processos industriais. Incluindo exemplos da produção de emendas dentadas, laminação de face para madeira laminada colada, aplicações de colagem lateral, produção de vigas I e painéis de grande formato.

Palavras-chave: adesivo poliuretano mono componente, tecnologia de aplicação

APPLICATION TECHNOLOGY OF ONE-COMPONENT POLYURETHANE ADHESIVES

ABSTRACT: One-component polyurethane adhesives are used for the production of engineered wood products across the world. The technologically most advanced application systems were developed in Europe and are now slowly being transferred into other regions. Switzerland is the birthplace of one-component polyurethane adhesive, where the industry has today between 15 to 20 years experience in the use of polyurethane to produce finger-jointed solid wood beams, lamellae, glue-laminated beams, I-beams and large format panels. In this presentation, Purbond will provide detailed information about the application of one-component polyurethanes for different production processes. It will include examples of the production of finger-jointed material, face lamination for glued laminated timber, edge-gluing applications, production of I-beams and large format panels.

Keywords: one-component polyurethane adhesives, application technology

1. INTRODUCTION

Depending on the product produced, different application systems can be used for 1C-PUR adhesives (Figure 1). Application systems offered by application suppliers for PURBOND adhesives include:

- Finger-jointing
- Face lamination
- Edge gluing
- Special applications
- Manual application



Figure 1 – Application fields of PURBOND adhesives

2. PURBOND APPLICATION SYSTEMS

Finger-jointing: There are two methods for applying PURBOND on a finger joint. One is by comb-application, the other by contact-free valve application. While the comb-application is widely used globally for different adhesive systems, the contact-free application is a system especially developed by Purbond in collaboration with application manufacturers with the aim to offer the producer a more accurate and cleaner application. This system is called KEBA (Keilzinken Berührungsloser Auftrag) and is today widely used in central Europe. Additionally, Purbond initiated the development of adhesive detection systems, which are used in combination with the KEBA-application offering a complete process control (Table 1).