

Re: ET foam "stretch marks"? (was NASA's Space Shuttle Processing Status Report, 22-11-2005)

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*Source:* <http://sci.tech-archive.net/Archive/sci.space.shuttle/2005-12/msg00129.html>

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- *From:* David Ball <davidbemail-1q04@xxxxxxxxxxxxxxxxxxx>
  - *Date:* Thu, 08 Dec 2005 12:06:13 -0600
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On 23 Nov 2005 11:29:51 -0800, "ed kyle" <edkyle99@xxxxxxxxxxxx> wrote:

>  
>snidely wrote:  
>> Jacques van Oene wrote:  
>> > 11.22.05  
> [snip]  
>> > STATUS REPORT: S-112205  
>> >  
>> > NASA'S SPACE SHUTTLE PROCESSING STATUS REPORT  
>> [..]  
>> > At NASA's Michoud Assembly Facility in New Orleans, shuttle engineers  
>> > continue evaluating the causes of the foam loss on Discovery's  
>> > launch. Detailed inspections of the Protuberance Air Load (PAL) ramp  
>> > of external tank #120 are providing valuable data. During  
>> > inspections, several small cracks were detected in the PAL ramp.  
>> > Engineers do not yet fully understand these cracks, but they are  
>> > unlikely to have caused foam loss.  
>>  
>>  
>> I don't think any other ET that has been cycled has been checked as  
>> closely as this one, so I guess we don't know much about those effects.  
>>  
>> What's the maximum number of times an ET has been filled and drained?  
>  
>I think that the mission before STS-51L, in January 1986, went  
>through nearly 20 tank loading cycles, if I remember correctly.  
>There was concern that the tank was approaching its design  
>lifetime. However, this would have been an Aluminum 2219  
>alloy tank. Today's super lightweight tanks, used since 1998,  
>are made of Aluminum-Lithium 2195 alloy. It could very well  
>be that the foam cracking problem has something to do with  
>the new tank alloy. Aluminum-Lithium would expand/contract  
>a bit more than Aluminum.  
>  
> - Ed Kyle

Does Michoud Assembly Facility have the ability to load a tank with

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cryo for testing?

— David

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