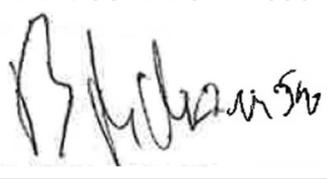


SPIECAPAG

2018 IPLOCA Health and Safety Awards

SAFETY TAG FOR LIFTING PARTS

00	04/05/2018	First issue	Guillaume HOMMEY 	Bruno GUY DE CHAMISSO 
REV. N°	DATE		Prepared By	Approved By

1. IDENTIFICATION

Name

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Jean-Paul Vanoudendycke – Site Manager, Spiecapag Dunkirk
Jean-Paul Chauvin – Project Director, TAP Greece section 1
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Guillaume Hommey – Corporate H&S Manager, Spiecapag

Company

SPIECAPAG

Projects

Spiecapag Corporate
Dunkirk workshop
Trans Adriatic Pipeline project Greece section 1, Albania
GRTgaz Val de Saône Lot 5 project

2. BUSINESS PROFILE

This dossier has been prepared to detail the Spiecapag submission for the IPLOCA Health & Safety Award 2018. This submission is made for the implementation of the Safety Tag for Lifting Parts all over Spiecapag projects.

With over 90 years of experience, Spiecapag is one of the world's leading companies in the area of oil and gas pipelines and associated systems.

A specialist in complex projects, Spiecapag has a unique list of references, from flagship projects to initial infrastructure in countries taking their first steps in oil and gas production.

For more than a quarter of a century, investors and major operators in the sector have guaranteed over 50% of the Spiecapag annual turnover.

With the help of its parent companies, Spiecapag can not only enjoy stability and financial solidity, but also a feeling of trust which allows it to position itself on the most ambitious projects.

Spiecapag believes that there can be no economic development without the respect of the stakeholders. Its certifications illustrate this.

We are a multicultural, multinational and multilingual company. Wherever our clients go, chances are that we have been there before and that we have personnel familiar with that part of the world. So we know what matters and how to find our way. This know-how is one of the keys, not only to our own success, but also to the overall success in the early phases of a project.

3. FINDINGS

Following incidents of fall of boom, wedge socket, cable mounting block, loss of axis detection on lifting equipment, Spiecapag has sought solutions to address the cause of these incidents. In fact, each time the pin of the offending axis was missing.



never again !

Although the verifications by the operators were carried out daily, pin losses continued to exist. These situations could lead to fatal accidents. The risk is therefore major despite the respect of exclusion zones. If during an activity of searching a shaft out of its housing, a sideboom or a crane could no longer carry a load creating a likely imbalance in certain phases and configurations (tie-ins, lowering-ins, etc.) cause the falling of all gear in the trench.

4. SOLUTIONS

Corporate management of Spiecapag undertook a thought process with Operation Department, QHSE Department and Technical Department to understand the full range of issues that needed to be overcome to ensure lifting equipment will be used without safety issues of axes and pin. We also seeking ideas for how to otherwise improve the task. Through these discussions the following objectives were identified:

- Find a simple system visible at all time;
- System not to change machine characteristics from manufacturer;
- High safety efficiency.

Solutions discussed were as follow:

1. All cotter pin to be replaced not re-used when in use to retain pins on hosting equipment
2. Check the width between ears of each wedge socket on the project. Change wedge socket with suitable one as necessary.
3. Improve risk analysis (JSA, Document Unique and method statement) and established lesson learned.
4. Improve crane verification check-list to include verification of the wedge socket (pins and ears)
5. Identify safety sensitive elements (critical points) and indicate on the priority on check-list.
6. Safety alert on project to share lesson learned.
7. Disseminate a safety alert in the Vinci group and IPLOCA.
8. Using of the safety alert for toolbox meeting (crane operators, plant).
9. **Establish a visible permanent position indicator ("flag" type) on the cotter pin to permit the crane operator to check at any time.**

All these solutions have been carried out but the last one, topics of the present initiative was a real step change in the manner to think construction machine improvement.

The result of a reflection between the Technical Department and the QHSE Department, Spiecapag has defined a "safety tag or flag" format for the pin of sensitive lifting elements. The idea came from this type of device in aviation.

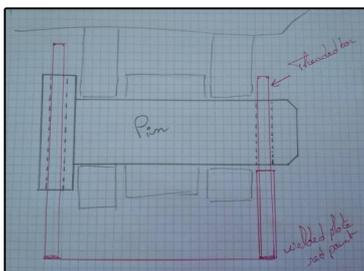


A simple, cheap and efficient system that allows operators and staff to know at all times that the pin is in place. As Spiecapag discussed with manufacturers and other contractors, this solution was never mentioned. This is an innovation.

5. IMPLEMENTATION

The implementation starts with definition of size, material, and colour of the safety tag.

Here under prototype:



First drawing



First test

To make the flag type, we have search for a sailmaker to design it and provide it to Spiecapag. The first batch was the good one as you can see under.



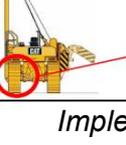
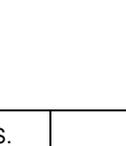
And test in real at Dunkirk workshop:



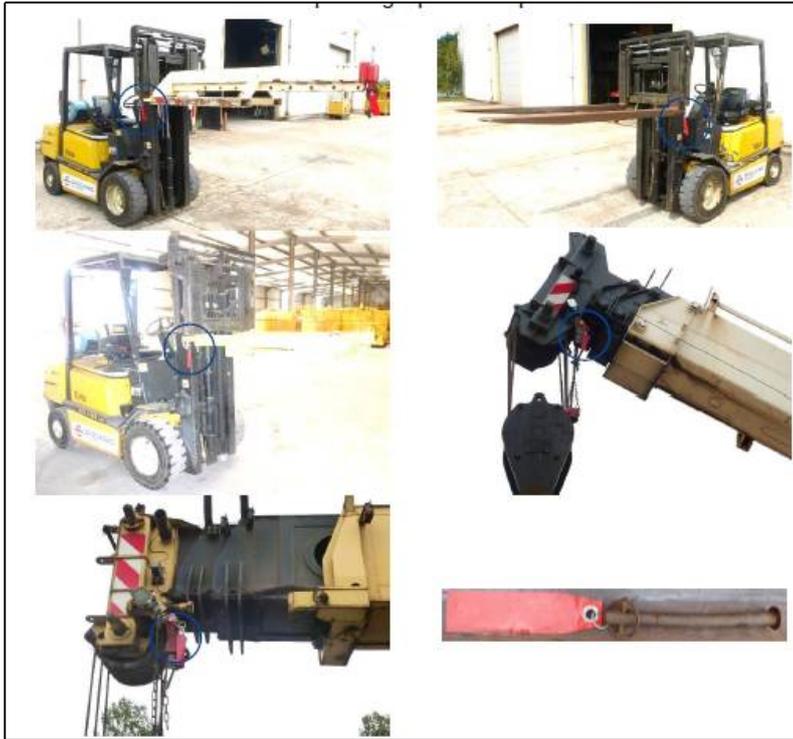
After tests the system was validated by all for implementation in all the current projects.

Plant Departments were in charge of the implementation with the support of Safety Departments.

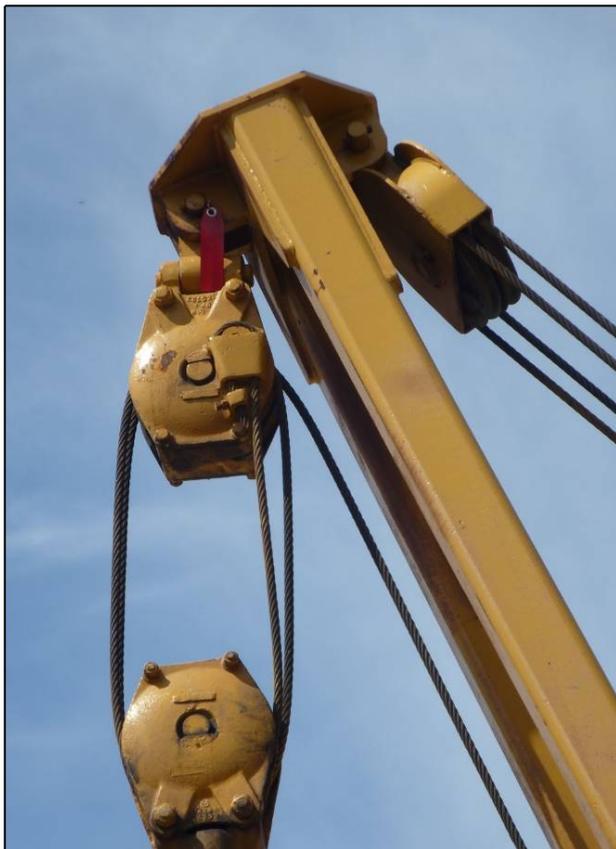
Examples as follow:

		OK	NOT OK	
	 Top Hook Block pin + retainer boom  Top Hook Block pin + retainer hook  Top Hook Block clamp cable	<input type="checkbox"/>	<input type="checkbox"/>	
		 Down Hook Block pin + retainer  Down Hook Block Hook safety latch	<input type="checkbox"/>	<input type="checkbox"/>
		 Boom Block pin + retainer  Boom Block clamp cable	<input type="checkbox"/>	<input type="checkbox"/>
	 Pulley pin + retainer  Boom cable	<input type="checkbox"/>	<input type="checkbox"/>	
		 Boom Pulley frame pin + retainer  Boom Pulley axle pin + retainer	<input type="checkbox"/>	<input type="checkbox"/>
	 Counterweight axle pin + retainer  Counterweight frame pin + retainer	<input type="checkbox"/>	<input type="checkbox"/>	
		 Boom pin + retainer	<input type="checkbox"/>	<input type="checkbox"/>

Implementation sheet (Sideboom version)



Forklift and crane equipped



Sideboom equipped

Of course the implementation was done day-by-day when mechanics have realized maintenance or when they reassembly a machine.

6. ACHIEVEMENTS

Since then, no incident or pin loss has been observed.

The staff is more confident, the operators no longer need to lower the boom daily (which would not be realistic) and the Client is confident because without being an "expert" everyone can know if the sensitive elements in terms of safety are in place at all time.

A question was asked by an operator: "If the flag is absent, what do we do?" The answer is simple, if the flag is no longer visible or if someone finds it on the ground, then we can consider that the pin is missing. So, stop the machine and call the mechanics.

The implementation of safety tag or flag on the projects helped to achieve the following positive outcomes:

- Statutory compliance; This position Spiecapag well found for the long term as the system can be used on all future projects and improves the risk profile of the business
- Efficiency improvements in:
 - detection of lifting equipment and gears failure before incident (elimination);
 - simplify day-to-day lifting equipment and gears check;
 - knowing of safety sensitive parts from workers.
- Improved morale of the crews;
- Client confidence in Spiecapag and also in the management team's commitment to safety improvement.

7. LONG TERM PLANNING

Effectiveness of the system has been proven by no observing incident as seen before in all projects and this is a useful and easily deployable throughout all future projects. Easy also to share within other professional using lifting equipment.

Team work with different departments in all the area (head office, workshop, projects) is a kind of team building and give Spiecapag personnel a glimpse to positively repeat it again with the same success.

Safety in mind, Safe on site !

