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The appliance of SCOPIC Clause in salvage projects : a salvage case study under the SCOPIC Clause

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The Appliance of SCOPIC Clause in Salvage Projects

A Salvage Case Study under the SCOPIC Clause

By

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DECLARATION

I certify that all the material in this research paper that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this research paper reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRCT

Title of dissertation: The Appliance of SCOPIC Clause in Salvage Projects

Degree: **MSC**

Salvage operation has been seemed to be a contribute action for over one hundred years. And the development of salvage law is slow and complex, that is from the Salvage Convention on salvage 1989 to SCOPIC Clause. SCOPIC Clause has been developed from 1999, and the newest edition is SCOPIC 2011. It is always invoked as the reference of LOF contracts. And the practical usage proves that it is an advanced and useful clause to solve the dispute of salvage awards. In this issue, the resource of SCOPIC Clause will be introduced. And throughout the analysis of a case, advantages and disadvantages of it will be discussed. However, it is not perfect. So some advice of change will also be discussed on the resolution of special compensation to balance the interests between ship interests, cargo interests and salvors.

Key words: salvage law, SCOPIC Clause, dispute, advantage and disadvantage, special compensation, ship and cargo interests, salvors

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LIST OF ABBREVIATION

SCOPIC	Special Compensation P&I Club
P&I Club	Protection and indemnity club
LOF	Lloyd's Open Form
DMC	Dalian Maritime Court
USD	United States Dollar
RMB	Ren Min Bi
SCR	Special Casualty Representation
ISU	International Salvage Union

Chapter 1 Introduction

1.1 Background

Casualty A was a 40000t bulker carrier. She dropped the anchor on the anchorage against the Cold Storm on December in North of China. However, as the negligence of watchman, he did not perceive that their ship was dragging anchor as soon as possible. It was too late when he called the captain, and finally the casualty grounded on rocks. There were risks both on the vessel and the environment.

Three salvors joined into the salvage operation. And all of them tried to or succeeded to invoke the SCOPIC Clause into salvage contract to ask for salvage awards. But the results were different:

- Salvor A did not succeed to salvage the casualty, and he tried to invoke the SCOPIC Clause to calculate salvage awards. But he failed to do that.
- Otherwise, Salvor B refloated the casualty, and he succeeded to invoke the SCOPIC Clause as the reference of LOF2000 contract to achieve salvage awards. Salvor C was rent by Salvor B for underwater oil pumping work. However, there were also some problems about the salvage awards under SCOPIC Clause.

1.2 Objectives of the Dissertation

The objective of the dissertation is to identify problems of implementing SCOPIC Clause and of achieving awards under SCOPIC Clause through a case study, and to provide advice on how to guarantee the interest of salvors.

Towards this end, the purposes of the research are:

i) to review the history of SCOPIC Clause, and his work on salvage awards;

ii) to analyze how to invoke the SCOPIC Clause;

iii) to analyze the problem caused by not-fixed rate regulated on Appendix A of SCOPIC Clause;

iv) to analyze the salvage awards on preventing or minimize environment;

v) to provide advice on how to improve the salvage awards system based on SCOPIC Clause.

In the issue, disputes of this case should be seemed as the main line. And theoretical knowledges and practical experiences should be both shown to analyze the disputes. And finally, some advice should be given to improve the operability of salvage awards system based on SCOPIC Clause.

1.3 Organization of the Dissertation

In chapter 2, the resource of SCOPIC Clause will be introduced. And its working condition and calculation method on salvage awards should also be shown.

In chapter 3, the case will be introduced in detail. And the disputes about salvage awards among Salvor A, shipowner and Salvor B will be discussed. Then problems appeared in the disputes will be analyzed.

In chapter 4, advantages and disadvantages of the SCOPIC Clause will be summarized through the analysis of the case. And the advantages and disadvantages will be discussed from the view of shipowners and salvors respectively.

In chapter 5, discussion will be mainly focused on the salvage awards about oil pollution prevention or minimize. Firstly, the oil pollution assessment of the case will be calculated. Then the question of the reasonability of actual awards system will be discussed. Finally, some recommendations will be given to solve the problem.

Chapter 2 The Resource of the SCOPIC Clause and Its Working Condition on Salvage Awards

2.1 The resource of SCOPIC Clause

The salvage law is an old law, which has developed for many centuries. A fundamental concept is that the salvor should be encouraged as an appropriate reward for his service, including salving the ship, cargo and bunker fuel oil, saving life and preventing damage to the environment.

The rewards of salvors depend on maritime properties they have salved. It has been a long standing principle that payment for the services should be based on success, the so called “no cure, no pay” principle.
(**http://www.marine-salvage.com/environmental/legal-framework/**, 2013)

However, as the development of oil transportation in the second half of the 20th century, which caused the spread of the damage pollution, the ancient salvage principle of “no cure – no pay” seemed unsuitable for salvage operations. Salvors spent much money carrying out the operation, while the residual value was low. Both of the two factors made many operations uneconomical. And all too often the problem was exacerbated by government intervention preventing the completion of the service by a refusal to grant a place of refuge. In that situation, salvors have no methods but tow casualties far away from coastal and sink casualties.

> This meant ‘no cure’ was affected, which in turn meant ‘no pay’ – despite any high salving expense. To encourage the salvor to go to the assistance of such ships the 1989 Salvage Convention ameliorated the harshness of this age old

'no cure – no pay' principal, by introducing in Article 14, a new concept – Special Compensation.

(Archie Bishop, 2013)

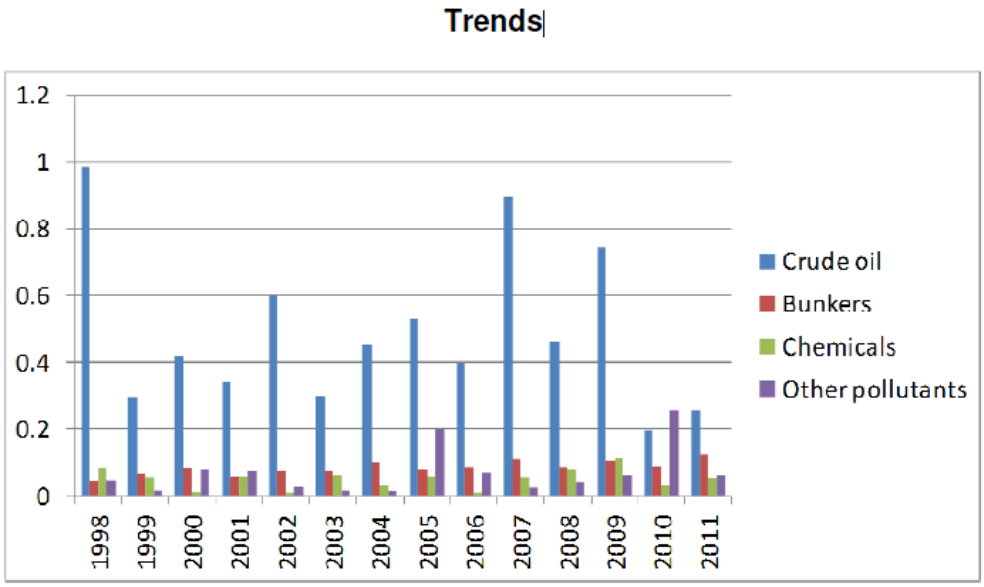

Figure 1 The Trends of Oil Pollution all over the world

Source: International Salvage Union (2012). *International Salvage Union Annual Pollution Survey - 2011 Results*. News Release for Immediate Use. p.3.

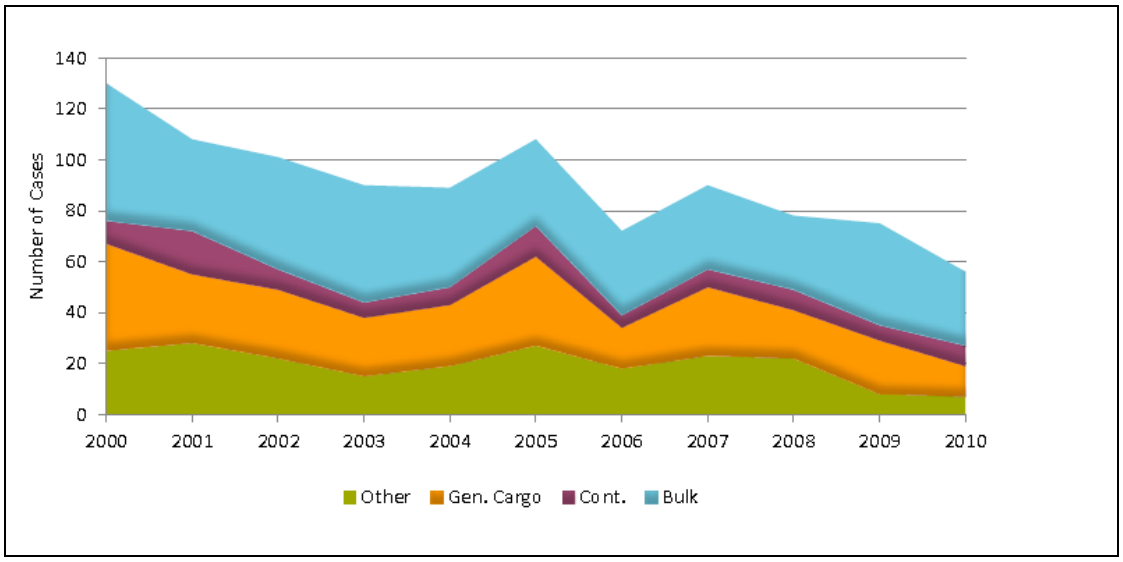

Figure 2 The Number of Cases

Source: LLOYD'S (2013). *Lloyds Open Form Report 2012*. p.6.

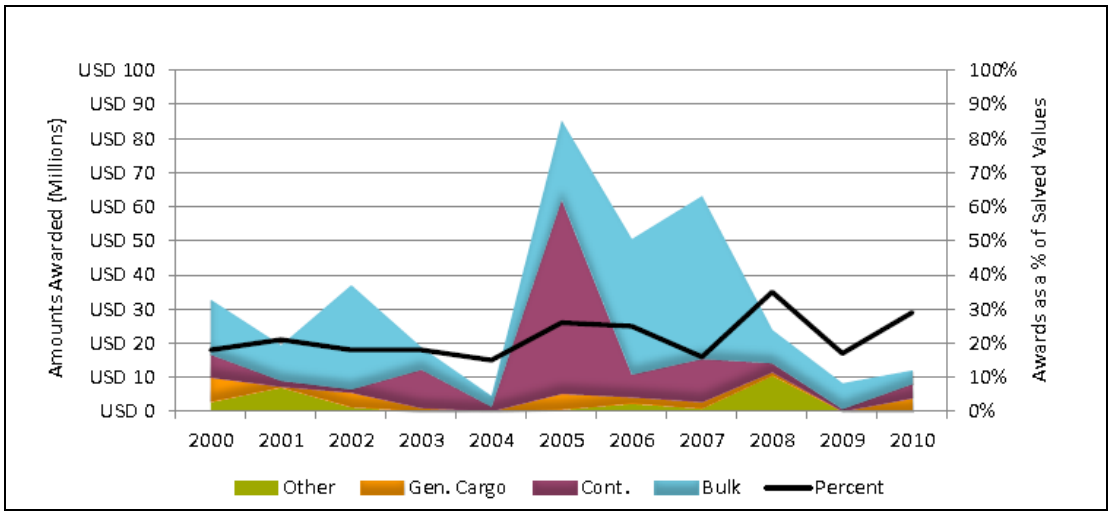

Figure 3 Salvage award statistics from 2000 to 2010 depending on different types of ships

Source: LLOYD'S (2013). *Lloyds Open Form Report 2012*. p.6.

Article 14 of <International Convention on Salvage, 1989> was published when salvors assisted ships that threaten damage to the environment within coastal waters (Archie Bishop, 2013). If the salvor actually prevents the damage of environment, he could receive at least 30% to 100% bonus. However, the compensation should be paid only on the condition that it exceeded the traditional salvage award. So it was only a safety net, which ensured that the salvor did not actually lose money.

Article 14 was well–intentioned but in practice it turned out to be cumbersome, contentious and expensive to operate and had the wholly unintended consequence of discouraging salvors from attending casualties where there was the threat of environmental damage (Archie Bishop, 2013). As under Article 14 the P&I Clubs was included in the payment team. Compared to the traditional salvage awards, which were always paid by ship and cargo interests, the P&I Clubs should pay compensation. They were also unhappy with the new provisions which involved them in salvage for the first time. (Archie Bishop, 2013)

In response to the problems, the shipping industry worked cooperatively to

> devise the SCOPIC clause – the "Special Compensation P and I Club" Clause, which was specifically designed to replace, and have the same effect, as Article 14, but avoid the legal problems that the assessment of Special Compensation under Article 14 caused. SCOPIC is a very large clause, one made up of 16 sub-clauses, three Appendices and two codes of conduct.
>
> (Archie Bishop, 2013)

2.2 Has SCOPIC worked?

In the period since its inception from 1999 to 2012 as the statistics reported by LOF, there have been 1488 LOF cases reported to Lloyd's. SCOPIC was invoked on 244 occasions (16.4% of cases). SCOPIC was not served as widely as LOF contract; however, it was indeed working well. And the statistics are as follows:

Table of statistics for Lloyd's Open Form (LOF)

Includes number of cases, settlements, awards and other information since 1990

Year	New Cases	Scopic Invoked	Settlements	Salvage Awards Published (Original)	Salvage Awards Published (Appeal)	Total Salvage Award (and %paid through Lloyd's - $1,000)	Article 14/SCOPIC Awards Published (Original)	Article 14/SCOPIC Awards Published (Appeal)	Total Article 14/SCOPIC Awards*
1999	123	14	77	30	11	$26,020 (84%)	-	2	$2,564,654
2000	133	16	67	22	13	$28,030 (77%)	-	-	-
2001	108	23	82	35	17	$26,904 (78%)	3	-	$2,662,876
2002	104	18	55	32	15	$39,422 (72%)	1	-	$555,692
2003	89	27	46	29	11	$24,919 (84%)	1	-	$1,088,143
2004	91	13	64	14	6	$14,318 (89%)	-	-	-
2005	109	20	46	18	5	$14,193 (88%)	-	-	-

2006	80#	11	40	19	3	$11,672 (79%)	-	-	-
2007	107#	23	43	22	11	$58,168 (59%)	-	-	-
2008	83#	15	46	20	9	$21,385 (60%)	2	-	$8,141,794
2009	122#	17	42	16	7	$116,766,(75%)	0	0	0
2010	111#	21	38	16	3	$9,462 (97%)	0	0	0
2011	106#	11	49	9	3	$29,440 (63%)	0	0	0
2012	122#	15	37	12	3	$10,559(54%)	0	0	0

Table 1 Table of statistics for Lloyd's Open Form (LOF)

Source: http://www.lloyds.com/the-market/tools-and-resources/lloyds-agency-department/salvage-arbitration-branch/archive-documents, 2013. *Table of statistics for Lloyd's Open Form (LOF) Includes number of cases, settlements, awards and other information since 1990.*

2.3 Salvage rewards under SCOPIC Clause

Once the SCOPIC is invoked as the reference of a LOF contract, the ship and cargo interests, the P&I Club must pay 3 million USD in security within two days. And the remuneration should be calculated according to the agreed tariff for day rates for equipment, personnel and craft regulated in Appendix A.

> The rates apply throughout the world and will thus be more generous to some than to others. If the parties do incorporate SCOPIC, its financial provisions will only kick-in if the salvor specifically invokes the clause in writing. He has the power to do so at any time and in any circumstances.
>
> (Archie Bishop, 2013)

Similar to Article 14, SCOPIC remuneration should also be paid relevant to the traditional award made against salved property under Article 13 of the Salvage Convention. To prevent salvors from invoking SCOPIC in every case, and to ensure that there is a real need for the protection of salvors. There is a balance.

a) Withdraw right from SCOPIC at any time of ship owners.

As the sub-clause 9 (iii) of the SCOPIC Clause states:

> The owners of the vessel may at any time terminate the obligation to pay SCOPIC remuneration after the SCOPIC clause has been invoked under sub-clause 2 hereof provided that the Contractor shall be entitled to at least 5 clear days' notice of such termination.
>
> (SCOPIC 2011, p.2)

b) Reduction of SCOPIC remuneration

If the traditional salvage award assessed is high than the calculated SCOPIC remuneration, not only no SCOPIC bonus should be paid but also the traditional property based award is reduced by 25% of the difference between it and the SCOPIC remuneration.

For example,

SCOPIC Special Compensation		
Item	Cost per day (USD)	Item cost (USD)
Two 7,000 BHP tugs for 10days rated FiFi 1.0 (of which 2 days fire fighting	1.1 per BHP Plus 1,000 when fire fighting	214,000
Salvage Master for 10days	1,500	15,000
Diving Supervisor for 5days	1,000	5,000
4 Divers for 5 days	750	15,000
150 kw Generator for 10 days (mobilised but not used)	200 (@50%)	1,000
4" electrical submersible pump (used for 2 days but then breaks down and is no longer used)	150	300
Two 4 ton Air Bags (Retail Price US$ 250 each) Mobilised and Used for 20 days	40 (n.b. limit of 1.5 times retail price for portable equipment)	750
Two 15-ton winches and wire mobilised but not used. Agreed not reasonable to mobilise	Nil	Nil
Consumables Welding Rods Fuel and lubes Fire Fighting Foam	Charged at cost	750 11,000 2,000
Plus many other items!		
Total		2,000,000
Add 25% uplift		1,500,000
Interest accrues at US$ prime rate plus 1% from termination		Say 100,000

of services until final payment	
Total with interest	2,600,000

Table 2 Table of the calculation of SCOPIC special compensation

Article 13 "No-cure, No-pay" awards	
Based on a Total Salved Fund of US$ 1,500,000	
Ship and Bunkers Salved Value	US$500,000 (1/3 of fund)
Cargo Salved Value	US$1,000,000 (2/3 of fund)
Article 13 Award assessed at	US$700,000
Add, say, US$50,000 for interest and apply currency adjustment factor	US$50,000
Total for Article 13	US$750,000
Ship Interests (probably Hull and Machinery Underwriters2) pay	US$250,000
Cargo Interests (probably Cargo Underwriters2)	US$500,000

Table 3 Article 13 "No-cure, No-pay" awards

SCOPIC Payment	
Total	US$2,600,000
Less total Article 13 Award	US$ 750,000
Balance Payable by Ship Interests	US$ 1,850,000

Table 4 SCOPIC Payment

Source: Hill. Dickinson. OFFICAL LAWYERS. 2003. *SCOPIC - Who does what.* Shipping "At a glance" Guide 4. pp.13, 14.

c) The balance also includes the right of the salvors

If SCOPIC is incorporated then it replaces Article 14 which will no longer

> apply. This is a crucial point for the salvor, for if SCOPIC is included but not invoked (or is later terminated), the salvor will not be covered by either Article 14 or SCOPIC.
>
> The owner may not escape from the LOF contract once it is signed but is entitled to terminate the SCOPIC clause on giving five days notice if the shore based authorities permit it. This is unlikely if there is actually a threat to the environment. However the salvor may withdraw from the entire LOF contract if SCOPIC is withdrawn by the owner and the salvage operation is no longer financially viable.
>
> (Archie Bishop, 2013)

To summarize, the SCOPIC Clause is a sort of "safety net" (which ensures that salvors can get compensation when no cure), and it is an alternative option for the contracting parties to agree to replace the Salvage Convention Article 14 when signing a Lloyd's Open Form salvage contract. As the SCOPIC Clause invoked in a LOF contract as the reference, the salvor agrees to try their best not only to salve maritime property at risk but also to prevent oil pollution. (Robert B. Parrish, 2012, p.4.)

For salvage awards, because of the fixed rates regulated in Appendix A of SCOPIC Clause, it is easier to calculate salvage awards than Article 14. However, there is also a balance between salvors and ship owners and relevant insurers to prevent the salvors from invoking SCOPIC in every case, such as the reduction of salvage awards.

Chapter 3 Case Study under the SCOPIC Clause

As the commercial reason, the case information as follows would not appear names of ship owner, salvors and the city (where the casualty grounded). As the statement and analysis of salvage award of the case, the advantage and disadvantage of SCOPIC Clause will be discussed. And at last, the recommendation will also be given.

3.1 Background of the case

3.1.1 Condition of the casualty

Bulk carrier A, that dragged anchor in the anchorage, grounded on the rocks in north of China in 2009.

a) And the main principle particular of the bulk carrier was as follows:

- Dimension：Loa190×Lpp181×B30×D16.3×Tid11（M）
- Light Weight：9539t
- Compartment Distribution: 5cargo holds
- Built in：1984

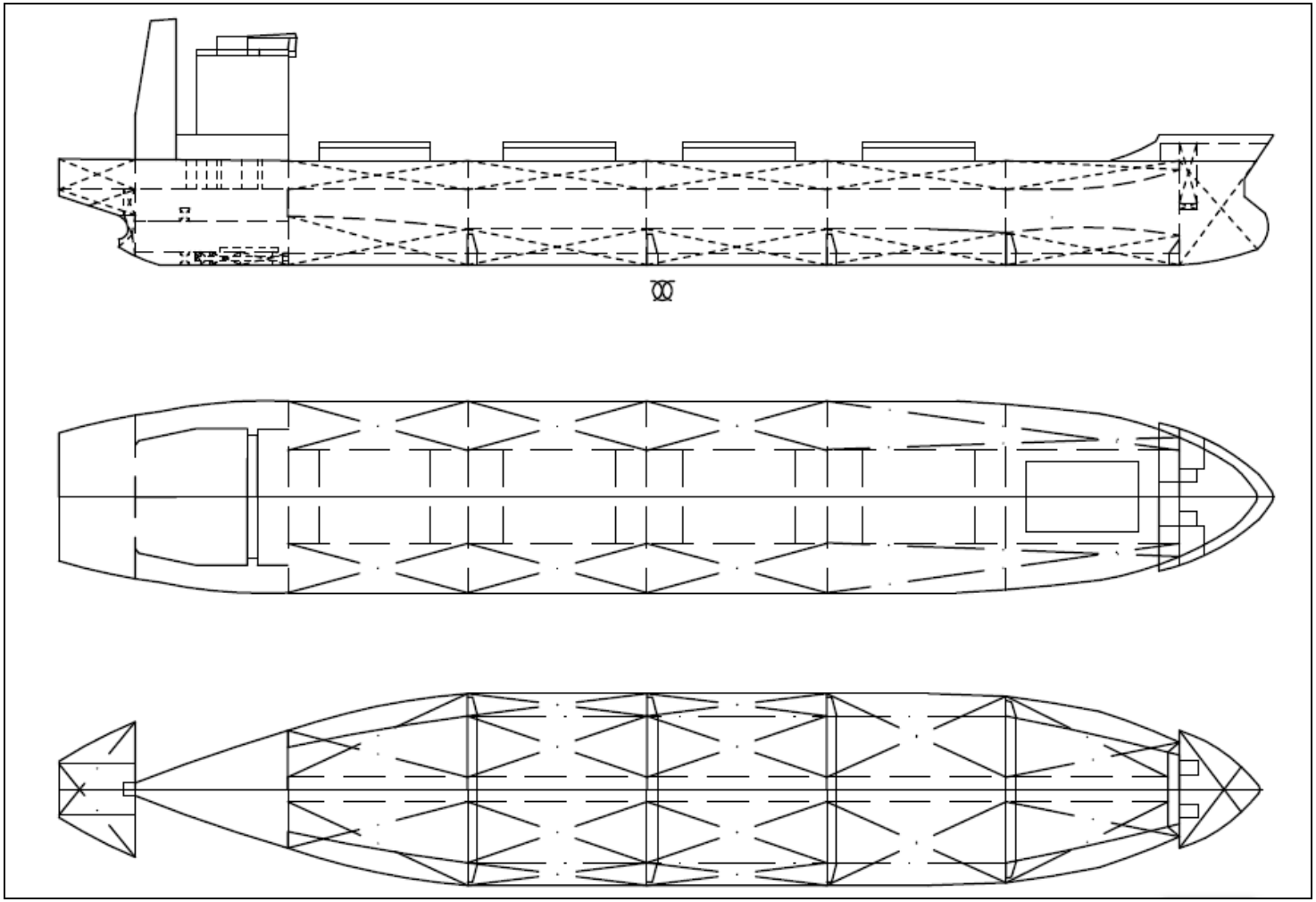

Figure 4 General arrangement of the casualty

b) Grounding condition:

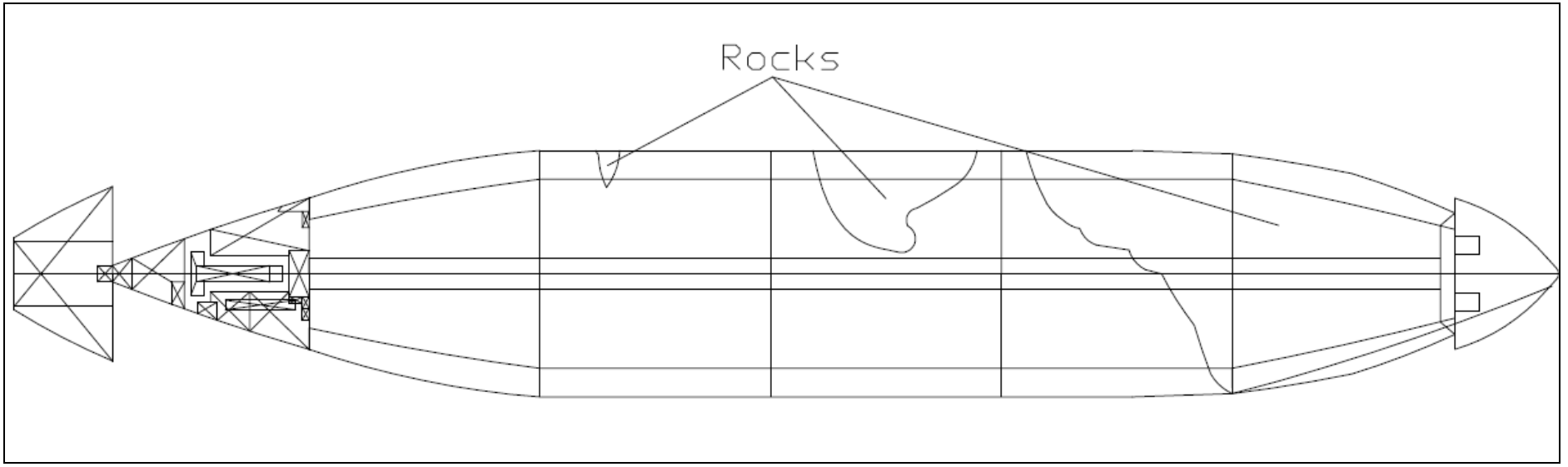

Figure 5 Grounding condition of the casualty

As show at figure 5,

- NO.1&2 Holds were almost on the rocks,
- Starboard of NO.3 Hold grounded on the rocks,
- Only a corner of NO.4 cargo hold grounded on the rocks.

c) Flooding condition:

- Doubt bottoms below positions of NO.1, NO.2, NO.3 and NO.4 Holds were flooded.
- Bottom plats of NO.1, NO.2, NO.3 and NO.4 Holds were broken in by rocks.

d) Heel and trim:

- Heel: 12 degrees starboard in high tide and 15 degrees starboard in low tide
- Trim: 1 degree stern

e) Remaining fuel oil on board:

- NO.3 FOT.P:250t
- NO.3 FOT.S:250t
- NO.4 FOT.P:300t
- NO.4 FOT.S:250t
- NO.4 Cargo Hold: about 50t spilled from NO.4 FOT.S
- Total: about1100t

f) Potential risk of the casualty

Two potential risks may happen in the further.

- Risk to be broken into two pieces

Thus, according to flooded condition, rocks broke into Holds, so the strength of the casualty was broken. As the power of wind, current and wave, the casualty played pendulum, which would enlarge holes in the hull. Finally, the casualty may be broken into two pieces.

- Overturn

As the casualty played pendulum, risk of overturn to starboard was possible.

Both of the risks above would cause fuel oil pollution.

So, this was an emergency situation, salvage operation should be quick and effective.

3.1.2 Salvors

There were three salvors that joined in the salvage project, Salvor A, Salvor B and Salvor C.

The salvage operation and working contract were shown below respectively:

	Salvor A	Salvor B	Salvor C
Salvage operation	Diving inspection	Ship salvage and oil recovering(underwater, in the Holds and on the sea	Underwater oil pumping out
Working days	4d	185d	46d
Contract	No contract	LOF2000 invoking SCOPIC Clause	Rent by Salvor B
Achievement for the bulk carrier	Initial diving inspection	Carried out ship salvage and oil recovering	Pumping approximate 40t fuel oil of NO.3 Hold

Table 5 Table of the three salvors

3.1.3 Overall of salvage operation

Salvor A checked the grounding condition of the bulk carrier; however the salvage project was out of his capability. So the shipowner rent salvor B to salve the bulk carrier.

For this case, the salvage process was divided into three parts. Firstly, as mixture power of strong wind, current, big wave and grouding rocks, the bulk carrier broke into two parts. And salvor B refloated the stern part and towed it to the place of refuge. Secondly, salvor B guarded the bulk carrier in the place of refuge. Thirdly, the bulk

carrier was towed to a dock， and remaining fuel oil was recovered.

Salvage operation succeeded.

3.2 Dispute analysis

For this case, three main disputes occurred. One was the salvage reward of Salvor A, and then was the not fixed fee of floating crane barge belonging to Salvor B, and the last was the oil recovered reward of Salvor B.

3.2.1 Dispute between Salvor A and the Shipowner

1) Introduction of the actions of salvor A and the Ship owner

Salvor A was a small salvage company with limited business of diving operations and simple salvage practices. Due to a lack of experience of salvage operation for big ships, and no successful experience of salving ships grounding on rocks, the idea, that it was easy to refloat the casualty, led the mobilization of a diver team and diving equipments of Salvor A to carry on the salvage operation as follows:

a) First of all, diving inspection was done, the report of which appealed some useful information, such as NO.1& NO.2 Cargo Holds were flooded. However, at the time of preparing leaking stoppage material, hull condition of the casualty, attacked by a cold storm, was worse than before:
   the NO.4 Hold flooded, some fuel oil of NO.4 FOT.S spilled into NO.4 Cargo Hold, and bottom plats of NO.1 &NO.2 Cargo Holds were further broken.

b) Quickly, the shipowner of the casualty asked for further broken assessment and salving plan. However, Salvor A recognized that he was too small that he could not control the bulk carrier and prevent or minimize possible oil pollution. So Salvor A agreed with the shipowner to stop his operation.

2) Dispute

The operation of Salvor A was stopped, but disputation occurred between Salvor A and the shipowner about the payment of the operations of Salvor A.

a) Salvor A

The practice he had done was “salvage operation”. Because according to < International Convention on Salvage, 1989>, the definition of “salvage operation” was as follows:

“Salvage operation” means any act or activity undertaken to assist a vessel or any other property in danger in navigable waters or in any other waters whatsoever. (International Convention on Salvage, 1989, p.1)

The casualty grounded on rocks, so it was in danger, which meant that the precondition of salvage operation happened, and salvor A, carrying out diver inspection, assisted further salvage practice. So the practice of Salvor A could be seemed as “salvage operation”.

In accordance with the Convention, diving inspection should be paid. And the operation should also be encouraged following the Special Compensation defined in Article 14 of < International Convention on Salvage, 1989>. Because he had been ready to plug holes in bottom plats of Holds, which showed that he tried to salve the casualty and prevent potential oil pollution. Although there was no cure, he should be encouraged as the Article 14(1) of the Convention said:

> If the salvor has carried out salvage operations in respect of a vessel which by itself or its cargo threatened damage to the environment and has failed to earn a reward under article 13 at least equivalent to the special compensation assessable in accordance with this article, he shall be entitled to special

compensation from the owner of that vessel equivalent to his expenses as herein defined.

(International Convention on Salvage, 1989, p.5.)

To calculate easily, the awards Salvor A asked for following with the fixed rate regulated in SCOPIC Clause APPENDIX A, 41,905 USD as total.

Obviously, the shipowner must not accept it.

b) Shipowner:

The operation of Salvor A was not "salvage operation".

Clearly, shipowner agreed with salvor A for the operation， it was the offer. And the operation of salvor A, such as diving inspection, meant his acceptance of shipowner's offer, although there was no written paper. Legally, the contract had existed. However, this contract was before the salvage project, and the shipowner had not decided which salvor should be chosen, and which plan should be carried on. So, operations of salvor A was not the content of salvage contract, furthermore, awards of salvor A should not be paid as < International Convention on Salvage, 1989> and SCOPIC Clause.

So the rewards of the effort Salvor A done should be paid only 9,450 USD. The rewards met the price of modern diving inspection, and also included the expense of leaking stoppage material prepared by Salvor A.

And shipowner stated: If it was not accepted by each other, the reward should be judged by arbitrators.

Then, Salvor A asked for negotiated settlement not delivering this dispute to arbitrators.

At last, they made a deal with each other, and the final reward of Salvor A was 10,000

USD.

c) Analysis

Salvor A made a reasonable choice. Because, if he delivered the dispute to an arbitrator. And the arbitrator recognized the operation of salvor A as "salvage operation". "No-cure, No-pay" principle would play a crucial role for salvage awards. However, there was no success to salve maritime life and property. So, there was a limited reward for salvor A. And the rewards should not be calculated as Salvor A asked for.

(i) There was no salvage contract, so that SCOPIC Clause, served as the reference of salvage contract, was no chance to be invoked in this case. In accordance with SCOPIC Clause Article 2:

> The Contractor shall have the option to invoke by written notice to the owners of the vessel the SCOPIC clause set out hereafter at any time of his choosing regardless of the circumstances and, in particular, regardless of whether or not there is a "threat of damage to the environment".
>
> (SCOPIC Clause, 2007, p.1)

Written notice was necessary for invoking SCOPIC clause; however, he had not received the written notice. So the calculation should not follow the rate regulated in SCOPIC clause.

(ii) The operation of Salvor A stopped after bad condition, that the NO.4 Hold flooded, some fuel oil of NO.4 FOT.S spilled into NO.4 Cargo Hold, happened. Before that, no equipments and operations were focused on preventing oil pollution, but for refloating the casualty. The poor experience of Salvor A had delayed the prevention of oil pollution. So the operation of Salvor A should not be encouraged.

If Salvor A asked for more rewards, the dispute should be judged by arbitrator, that would spend a lot of money and time, otherwise, the result was indeterminacy.

Overall, salvor A did not digest the Salvage Convention, especially the SCOPIC Clause.

3) Similar case

Similar case occurred in China in 2003. “SUKA” grounded in the Yellow Sea of China. The salvor got a fax from the company to inspect the grounding condition of “SUKA” and gave salvage suggestion. Then the salvor mobilized a salvage expert team to the grounding point, and carried out inspection and gave a primary salvage plan. However, the shipowner did not accept the salvage suggestion of salvor. So the expert team demobilized to Yantai. After that, the salvor asked the company for the payment (197,250 RMB), which was according to the rate regulated in the Appendix A of LOF2000, of their work. But the company would like to pay the expense of the salvor, approximately 5000RMB. So the salvor appealed the shipowner to Dalian Maritime Court (DMC). The final payment was that： The practice of the salvor was not “salvage operation”, so the payment of the salvor’s action was the expense of the salvor, 5000 RMB as total.

3.2.2 Dispute between Salvor B and Shipowner

Obviously, Salvor B was the main salvor in this case. Salvor C was rent by Salvor B for underwater oil pumping work.

1) Introduction of the actions of salvor B

The salvage operation of Salvor B should be divided into three parts. The three parts and contracts were as follows:

	Salvage operation	Contract
Part 1	➢ Refloating the casualty and towing the bulk carrier to the place of refuge ➢ Recovering spilling fuel oil in NO.4 Hold ➢ Pumping some fuel oil out of NO.3.S FOT	LOF2000 invoking SCOPIC Clause
Part 2	Guarding the casualty in the place of refuge	
Part 3	➢ Towing the casualty to the dock ➢ Recovering remaining fuel oil of the casualty in the dock	

Table 6 Three parts of salvor B's operation

As shown in the table 6, the type of contract was LOF2000, and SCOPIC Clause was invoked. So, the salvage rewards should be calculated according to the Appendix A of SCOPIC Clause.

2) Disputes

As the imperfectness of SCOPIC Clause, there were some disputes.

a) Not fixed rate

For this case, two crafts served for the casualty. One was a 350t floating crane barge ("350t craft" for short as follows), another was the 1700t floating crane barge ("1700t craft" for short as follows). And these two crafts mobilized after the shipowner receiving written note from salvor B invoking SCOPIC Clause. So the rate should be charged out according to the APPENDIX A of SCOPIC Clause. As shown in APPENDIX A (SCOPIC) Art.2 :

> Any other craft, not falling within the above definitions, shall be charged out at a market rate for that craft, exclusive of fuel and lubricating oil, such rate to be agreed with the SCR or, failing agreement, determined by the Arbitrator.
>
> (SCOPIC Appendix A, 2007, p.1)

In this case, the SCR (Special Casualty Representation) said that the rate of 350t craft was more than that of 1700t craft. And he also said that, for this case, only one craft could be seen as professional salvage craft. So 350t craft played a role of professional salvage craft, while 1700t craft played a role of lifting barge. The market rate of professional salvage craft was much higher than that of the lifting barge, although lifting capacity of 1700t was much larger than that of 350t craft.

However, this was not accepted by Salvor B. For his view, bad and complex weather meant low efficiency of salvage operation. And 1700t craft also served as the professional salvage craft.

The usage of 1700t craft was divided into four parts:

- Mobilization: 2 days
- No heavy lifting work: 23 days
- Heavy lifting work: 6 days
- Demobilization: 2 days

All statistics above included bad weather. And the days of Mobilization, Heavy lifting work and Demobilization were agreed with each other. However, the days of No heavy lifting work was controversial.

b) Whether 1700t craft was necessary in NO heavy lifting days?

Shipowner

There was a 350t craft, which can not only serve as professional salvage craft. And there was no heavy lifting work out of the lifting capacity of 350t craft. So mobilization of 1700t craft too early was not reasonable.

Salvor

The mobilization of 1700t craft at first was reasonable.

(i) Salvage work was too difficult, and it was so much that one lifting barge was not enough. The reasons were as follows:

- The bulk carrier grounded on rocks with listing to starboard about 15 degrees. The pictures of the grounding condition was as follows

Figure 6 Grounding photo 1#

Figure 7 Grounding photo 2#

Almost all the work should be assisted by revolving crane. And the bulk carrier was too big that 350t craft could only serve in three Cargo Holds one time as the limitation of the capacity of lifting radius. The only way to serve for the other two Cargo Holds was moving the position of the craft unceasingly. This method reduced work efficiency and there was also a potential risk for the craft, which was the sand seabed on fixing anchors points of the craft. Practically, as the movement of the craft, some of the fixing anchors suffered from bigger pulling power than standby. So once the craft moved, the fixing anchors moved. In that condition at least half one hour was spent fixing the anchors again, and lifting work could only be done after the position of the craft was fixed.

So one of the craft was not enough.

- Another duty of 1700t craft was to recover the spilling fuel oil in Cargo Hold NO.4.

Fuel oil recovering work in Cargo Hold NO.4 should be carried out as soon as possible. As the salvage plan, holes in NO.4 Cargo Hold should be plugged, so there would be enough buoyancy for the bulk carrier to refloat. And the recovering skill was shown in the following picture:

Figure 8 Oil recovering photo

This operation should be carried on effectively by revolving crane with more than two tool hooks. There was only one tool hooks in 350t craft, while there were 4 tool hooking in 1700t craft. So this work should be operated as the assistance of 1700t craft.

(ii) Implement of professional salvage craft

1700t craft also played the role as professional salvage craft in bad sea condition. Because the anti-wind capacity of 1700t craft was more suitable for bad sea condition, including rough wind, big wave and strong current, than that of 350t craft. So the

salvage efficiency was improved after 1700t craft joining in.

For detail, on December in North of China, cold storms always break salvage operations into pieces, and every piece is merely more than 3days. Big wave would keep hours or sometimes one day after cold storm, although wind became smooth. So working in "weather window" as long as possible was necessary. According to the capacity of anti-storm, 1700t craft could standby the bulk carrier much earlier than 350t craft, and 1700t craft could assist diving work in Cargo Hold using portable diving equipment. 350t craft could join in when the sea condition was good. So it was consistent with "salve casualties as soon as possible".

As a drastic debate, it was reasonable that the 1700t craft joined in the salvage project. And another dispute occurred after that.

c) What's the rate of 1700t craft?

Shipowner

In accordance with APPENDIX A (SCOPIC) Art.2 (c)， 1700t craft should be charged out at a market rate as a lifting crane barge, not professional salvage craft.

For this case, only one professional salvage craft was enough, the 1700t craft was for recovering fuel oil and lifting to assist to refloat of the bulk carrier. So 1700t craft should be paid as the market rate of lifting crane barge.

Salvor

As shown above, there were portable diving equipments and diving operations were done on 1700t craft or assisted by 1700t craft. So 1700t craft should be charged out at a rate of professional salvage craft.

Arbitrator

As the evidence and salvage practice shown above, the diving work was mostly in

Cargo Hold NO.1, NO.2 & NO.3. 350t craft served as professional salvage craft was enough to carry on the work, so only one professional salvage craft was enough. It meant that only one of 350t craft and 1700t craft could be seen as professional salvage craft. There were fixed diving equipments on 350t craft, such as Decompression Chamber (including compressor), so 350t craft seen as professional salvage craft was reasonable. And the rate of professional salvage craft was agreed by both the shipowner and the salvor; therefore 350t craft should be charged out of that rate. After that, according to sub-clause 2(a), the rate of 1700t craft followed the market rate of lifting crane barge. In accordance with the assistant operation for diving work, all the portable equipments used on 1700t craft should be charged out as the rate regulated on sub-clause 3(a) of APPENDIX A (SCOPIC).

Analysis

Although SCOPIC Clause, regulating fix rate of simple tug and equipments for salvage actions, makes the calculation of salvage rewards easier than before, usually there are disputes of no fixed rate of salvage resources, especially professional salvage ships.

As the arbitration of this case, some recommendations are shown as follows:

(i) One sub-clause should be edited in SCOPIC Clause to solve the number of professional salvage barges as follows:

Normally, only one professional salvage ship is enough for individual case. If more such ships are needed as bad sea condition or too much work, it should be agreed by SCR, if not, it should be delivered to the arbitrator.

And this edition should be added into sub-clause 3(a) of APPENDIX A (SCOPIC).

(ii) The rate of special ships should be listed as a reference price. Although the market rates of different parts of the whole world are different, the reference price can limit the Salvor and the shipowner from making deal as practical market rate.

d) Awards of fuel oil recovering

Introduction of the fuel oil recovering work

Salvage operation of fuel oil recovering was carried out into three ways.

(i) The spilling fuel oil in Cargo Hold 4# (approximate 50t) was recovered by the cooperation of floating crane barge and fuel oil recovering workers.

All these work was finished in 4 salvage days (not including bad weather).

(ii) The other operation was carried by Salvor C, who used underwater oil pumping system. Equipments of this system were as follows:

This system was a world-advanced system, it served as a professional underwater oil pumping system. And this system was very expensive, more than 10,000,000 USD. It was operated for 15 salvage days (not including bad weather), however only 40t fuel oil of Cargo Hold 3.S were pumped out.

NO.	Equipments	Type	Quantity
1	Underwater drilling equipments	IP152SS	2
2	Oil withdrawing pump	MSP100	3
3	High-pressure tube	50M/p	6
4	Spares container		1
5	Hydraulic power units	R25/ 15HP	1
6	High temperature resistant tubing	₵62.5mm	80m
7	Steam tube	₵75mm	90m
8	Waterpipe	₵100mm	240m
9	Steam boiler		1
10	Hydraulic Pump Station	37KW	2
11	Hydraulic Station	25HP	1
12	Helical rotary pump		1
13	Power actuated setting device		2

Table 7 Oil pumping equipments list of Salvor C

(iii) Oil recovering in dock

At last, Salvor B made a deal with a shipyard. The casualty was permitted to be towed into the dock, and after the water of the dock was pumped out, oil recovering operation was carried on in the dock without sea water. However, Salvor B should pay very much money to the shipyard, and the dock should be cleaned up by Salvor B

after fuel oil recovering. The related picture was as follows:

Figure 9 The dock

Contract of these operation were agreed with LOF2000 invoking SCOPIC Clause as reference between the shipowner and Salvor B.

For the first step, there was no dispute. Because despite the awards of 1700t craft, there was only the reward of oil recovering workers, which was much cheaper than that of machines, paid by the shipowner. Compared with the success of this step for reducing risk of oil pollution, the reward was low.

However, dispute occurred in the second step. There was only a limited cure made from oil pumping work, but the reward asked was too high, which was mainly as the high rate of the professional equipments used. And the condition that Salvor C asking for 25% plus of daily rate was not accepted by the shipowner. This part of reward failed agreement with SCR, so it was determined by the arbitrator.

In the third step, the effort of preventing fuel oil pollution was large. The contract of step 3 was also the LOF2000 invoking SCOPIC Clause. The casualty was refloated on the place of refuge, towed to a dock. After that, fuel oil (approximately 1000t) recovering work was carried out in the dry dock.

Obviously, most of pollution recovering was carried out in step 3. The end of pollution recovering meant the end of salvage operation of Salvor B. There was no dispute for the rewards of this step, because the rewards Salvor B asked for was agreed by the shipowner in accordance with SCOPIC Clause.

However, Salvor B chose APPENDIX A of SCOPIC Clause as the reference of LOF2000, which was a debatable. So there was a doubt whether was there a better way to encourage the service of Salvor B.

Dispute

Shipowner

The daily rates of underwater oil pumping equipments were too high. The days, that such equipments used, were very long; meanwhile the effort of this action was only a little. So the rate should be reduced, and no plus.

Salvor B

Salvor C had tried their best to engage on their job, however, this work was so hard that only a few companies could do like that. Because, the temperature of the fuel oil was below 0 degrees, the fuel oil looked like solid at that degree. And the liquidity of fuel oil could not become well until the temperature was up to 40 degrees. This character caused the delay of oil pumping process. As the hard work of Salvor C, daily rate plus 25% was the encouragement to Salvor C.

Arbitrator

The main agreement between and shipowner in that period was LOF2000 invoking SCOPIC Clause. The rate met the sub-clause of SCOPIC APPENDIX A. So the rate of underwater oil pumping equipments should not be reduced. And the plus was accepted.

For SCOPIC Clause, 25% plus should be paid as stated in sub-paragraph 5(iv):

> In addition to the rates set out above and any out of pocket expenses, the Contractor shall be entitled to a standard bonus of 25% of those rates except that if the out of pocket expenses described in sub-paragraph 5(iii)(b) exceed the applicable tariff rates in Appendix "A" the Contractor shall be entitled to a bonus such that he shall receive in total
>
> (a) The actual cost of such men, tugs, other craft and equipment plus 10% of the cost, or
>
> (b) The tariff rate for such men, tugs, other craft and equipment plus 25% of the tariff rate whichever is the greater.
>
> (SCOPIC Clause, 2007, p.1)

25% plus was a fixed bonus. So it should be paid.

Analysis

The dispute was focused on the rate of portable salvage equipments and the bonus of salvage operation.

The SCOPIC Clause explains relevant problems very clearly.

(i) First of all, Salvor C was a professional team of China government, and China was one member of ISU. So the rate of salvage resource used should be paid

as sub-paragraph 5(iii)(a) stating:

> If the expenses relate to the hire of men, tugs, other craft and equipment from another ISU member or their affiliate(s), the amount due will be calculated on the tariff rates set out in Appendix "A" regardless of the actual cost.

(SCOPIC Clause, 2007, p.1)

It means that the payment of Salvor C should be calculated on the tariff rates set out in Appendix "A". No matter how much expense was out of pocket.

(ii) Reduction of stiff rate

SCOPIC Clause is a "gentlemen agreement" between ISU and P&I Club. The rate regulated in Appendix "A" of SCOPIC Clause was faced to the whole world. Once SCOPIC Clause was invoked, the rate should not be modified individually.

The salvage law professor Mike Stevens stated that:

Up to now, on the whole world including England, there has been no case that the clause was modified and the rate of SCOPIC was replaced by other standard, if the main agreement is LOF series invoking SCOPIC Clause. (Ye, 2012, p.76)

3.3 Arbitrator Time

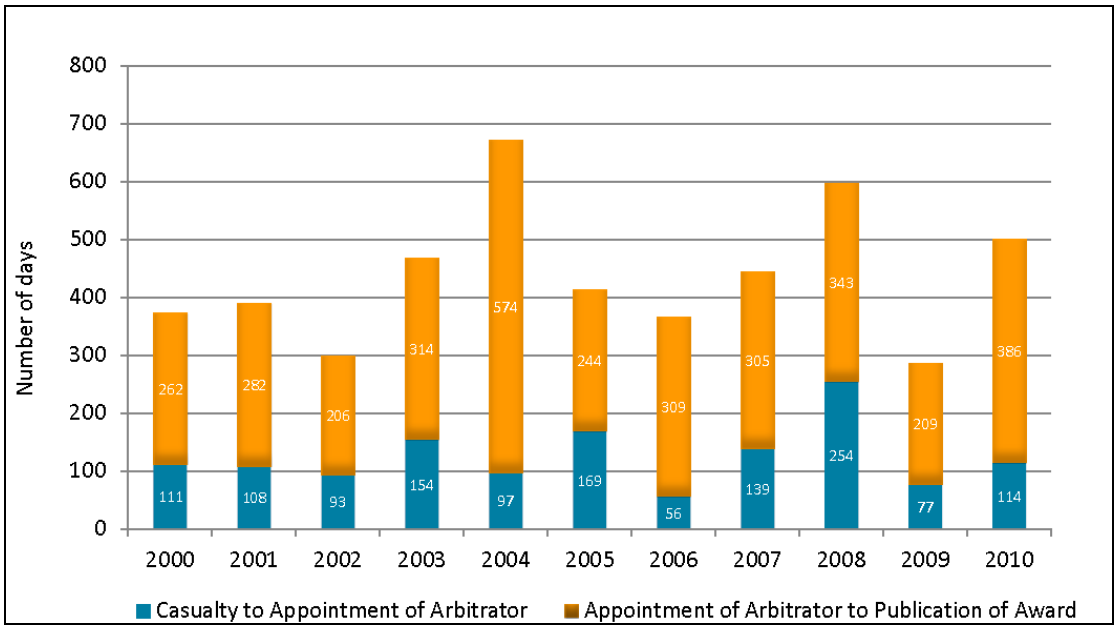

Figure 10 Statistics on average arbitrator time of salvage cases under LOF

Source: LLOYD'S (2013). *LLOYD'S OPEN FORM REPORT 2012.* p.9.

As shown in figure 10, the average of total arbitrator time in 2010 was 500days. However, for this case, the total arbitrator time was less than one year. Obviously, the arbitrator time was much less than that of average in 2010. This was the contribution of SCOPIC Clause.

Chapter 4 The advantages and disadvantages of SCOPIC Clause

As the statement and analysis of the case above, the SCOPIC Clause has several advantages, such as preventing salvors from losing money in salvage operation, easier to calculate salvage awards than before and reducing the arbitrator time. However, there are also some disadvantages. And the advantage and disadvantage of SCOPIC Clause are discussed from views of the shipowners and the salvors respectively.

4.1 Advantage of SCOPIC Clause

For ship and cargo interests, P&I Club

a) Less arbitration occurs on special compensation awards than before. And the problems appearing in <International Convention on Salvage, 1989>, such as environmental threat, geographical restriction, tug rates, and uplift, have been settled.

Statistics show that the SCOPIC clause is incorporated in most LOF contracts that are agreed today but it would seem its provisions are only invoked and come into effect, in about 20% of those cases up to June 2010. When it is invoked the minimum payment due under the contract can easily be calculated mathematically making subsequent disputes few and far between. To date there have been about 45 cases in which the SCOPIC clause has been invoked. Whilst some of those cases are still current, in only 2 cases has it been necessary to proceed to arbitration. The clause therefore seems to be achieving its objective of encouraging the salvage industry to proceed to seriously damage ships which have low value, secure in the knowledge that they will receive a minimum

payment of a scale which is acceptable to them.

(Archie Bishop, 2013, p.8)

b) Owners/clubs have much more control, or at the very least, knowledge of what is happening during a salvage operation.

One of the key features of SCOPIC, which distinguish with the Salvage Convention, is that the owner may appoint a Special Casualty Representative (SCR) to attend the casualty and report on activity. The SCR is not influenced by the salvage master who also retains full control of the operation. If he does not agree with the salvage master's daily report the SCR must send a dissenting report. The presence of the SCR ensures that the owners and their insurers are kept fully informed and comforted and may keep a tally of costs as they build up.

One of the leading Lloyd's underwriters, who actively participated in the discussions which lead up to the introduction of SCOPIC recently expressed a positive view in the following terms:

"SCOPIC has been a very worthwhile development. Salvors are responding to difficult casualties with greater confidence. The Special Casualty Representative has been a useful development. So far, the SCRs have been well chosen, but this high standard must be maintained. We have been monitoring the performance of SCRs with interest and I am pleased that they have demonstrated a very high degree of objectivity".

(Archie Bishop, 2013, p.9)

c) The uplift is capped at 25 per cent.

Compared with the uplift from 30% to 100% bonus regulated in Article 14 of <International Salvage Convention, 1989>, 25% plus is more acceptable by ship and cargo interests, P&I Clubs.

For salvors

a) It is no longer necessary for salvors to prove that there was an environmental threat or to overcome any geographical restriction defense.
b) The payments of personnel, equipments and crafts include the profit. So there is no longer voluntary salvage service under SCOPIC Clause.
c) Less arbitration reduces time and money.

As shown above, arbitration are less than before, and if it is determined by the arbitrator, less time is spent. So, it releases the financial pressure of salvors. As a result, salvors can invest in personnel training, equipments and craft renewal.

4.2 Disadvantage of SCOPIC Clause

As shown above, the SCOPIC Clause is an advanced system to reduce the disputes. **However, SCOPIC Clause is not perfect.** And the disadvantages are as follows:

For shipowners

- The salvors may recover more for the agreed tug rates than they would under the "NAGASAKI SPIRIT" decision, but this is not certain because of the different utilisation factors.
- Shipowners/clubs have given up the environmental threat and geographical restriction defenses.

For salvors

- Salvors can never recover more than 25 per cent uplift. Whether is it reasonable and how to resolve it will be discussed after.

- There is a greater risk that the owner terminates the contract. This is a balance for the invoking right of the salvors. And if the SCOPIC Clause is terminated, salvors would drop into the dark hole of Article 14 of the Salvage Convention.
- The balanced clause leads potential financial risk for salvors. If salvors misuse of the invoking right, and the SCOPIC compensation assessed is less than the awards based Article 13. 25% of the different between them should be reduced from the awards based Article 13.

Chapter 5 Discussion of Environmental Salvage Awards

5.1 Oil pollution assessment

The assessment of oil pollution should not be departed from the economic impact of the grounding position.

Figure 11 Grounding point and the place of refuge

As shown in figure 11, the casualty grounded on the position of the five-pointed star. And the place of refuge was in the red circle line.

If there was a pollution case caused by the casualty. The economy of that city would be influenced very much, especially on tourism, fishery industry and international trading.

As the economic statistics of that city of 2010, the income of fishery industry was approximately 2.36 billion USD, and that of international trading was about 13.9billion USD. The city was a tourist attraction, which was famous as the island and comfortable living condition. And the assumed pollution would be a destructive influence for the tourism industry. Only according to the income of tourism in 2010, there was approximately 3.19 billion USD. (Wei Hai city Bureau of Statistics, 2011)

The impact of international trading maybe disappears immediately if spilling oil was recovered, assuming one month. However, the influence of fishery industry and tourism industry would last for maybe one year and half a year respectively. The assessment below was only about the direct loss but no indirect loss, such as loss caused by financial loss and immigrant decrease.

The assessment of pollution expense could be calculated as follows:

	Income of 2010	How many months impacted	The loss
International trading	13.9 billion USD	One	1.16 billion USD
Fishery industry	2.36 billion USD	Twelve	2.36 billion USD
Tourism industry	3.19 billion USD	Six	1.59 billion USD
Total			5.11 billion USD

Table 8 Assuming impact of Wei Hai city economy

As shown in table 8, direct loss of assuming pollution was about 5.11 billion USD. And adding the remaining of the casualty was more than 7 million USD (as the casualty breaking into two pieces); the salvage effort was nearly 5.2 billion USD.

However, for salvage reward, Salvor B and Salvor C achieved approximately 15 million USD under the SCOPIC Clause, less than 3% of the total effort. If indirect loss was considered, the percentage may be less than 2%.

5.2 Whether was the reward reasonable?

Compared with the income and the investment of salvors in this case, there was no loss for them and only a bit profit. However, it did not meet the "encourage" principle of oil pollution prevention. For Article 14 of < International Salvage Convention, 1989>, the bonus can be improved from 30% to 100%. But, as SCOPIC Clause, the bonus is a fixed 25% plus.

For this case, there was no choice for Salvor B but to invoke the SCOPIC Clause as the reference of LOF2000 contract. In fact, Salvor B was not sure that he could salve the casualty successfully because of the casualty's grounding condition and bad weather in that season. And he assessed that even though he salve the casualty successfully, the salved value would be less than he invested. So, to reduce the risk, he preferred to invoke SCOPIC Clause in LOF2000 contract, although the profit may be only a little.

On the other hand, only a little profit means that the salvor will develop slowly. It means that only a little money can be used for technology improvement, professional crafts and equipments renewed and personnel training. This is the contrary of "encourage" principle and delays the salvage industry, which may reduce the efforts of oil pollution prevention caused by maritime casualty.

Finally, although it could be seemed as a successful salvage case, limited profit meant that the operation of oil pollution prevention could be seemed as volunteer work.

For the whole salvage industry Andreas Tsavliris stated the condition of salvage

industry clearly:

> Since those days in Montreal, over 30 years ago, much has changed. The structure of the salvage industry is different. Today, there are only a few salvors with a global reach and capability. At the same time there has also been a decline in the amount of salvage work available. 20 years ago there were on average about 200 Lloyd's Form cases a year, today there are less than 100 each year.
>
> (Andreas Tsavliris, 2013)

Similar with this case,

> If the ship and cargo are of little financial value, or even valueless, the salvor (if a LOF is signed), will hopefully have the benefit of the SCOPIC Clause. This operates very well to reduce the financial risk, but the SCOPIC Clause is tariff based, and does not have a reward mechanism for the salvor's work to prevent damage to the environment.

(**http://www.marine-salvage.com/environmental/isu-environmental-salvage-awards-article-maritime-risk/**, 2013)

A new reward mechanism may be a good way to solve the problem. However, how to establish the mechanism is a new problem.

5.3 How to establish the reward mechanism?

This is a complex problem, which has occupied the maritime debating floors for long time. And the detailed problems have not been answered as follows:

a) How to define damage to the marine environment?

b) What type of damage should be taken into consideration?

c) How to predict the size and severity of the potential damage?

d) Which conditions need to be met, in order to be certain that the potential damage would (most likely) occur?

e) Can the salvor claim serious threat to the environment for every ship salved, is this to be decided on an individual case basis by the court/arbitration, or will there be a strict set of criteria established?

f) The most important question is, as expected, who will pay for the Environmental Award?

(M.MUDRIĆ, 2010, p.484)

This problem has been discussed a lot among ISU and the Property underwriters. And the Present of the ISU introduced "parallel remuneration" – property-based Salvage Awards and Environmental Salvage Awards – that would solve several problems at a stroke:

- It would enhance protection against potentially catastrophic spills.
- It would reduce the scale of financial, economic and environmental losses, including P&I pollution claims costs.
- It would address high-profile political and public interest concerns.
- It would contribute to the long-term viability of the salvage industry.
- It would contribute to the sustainability of marine emergency services.
- It would contribute to cleaner oceans and cleaner beaches.

(ISU, 2013)

To meet the idea of "parallel remuneration", some changes should be made in current salvage law.

> **The key changes would be a new Article 14.** The existing Article was extensively examined in numerous Lloyd's Open Form arbitrations and carefully examined by the House of Lords (English law's Supreme Court at the time) in case of the "Nagasaki Spirit". On the whole the industry found Article 14 uncertain in outcome, cumbersome to operate and expensive to implement. It was replaced in Lloyd's Open Form cases by SCOPIC but is still the law in 59 countries.
>
> (Andreas Tsavliris, 2013)

Firstly, some existing clauses should be removed and replaced with a straightforward form of words to separate an adding environmental salvage awards from the awards made under Article 13 (property awards), if a salvor carries out operations on a casualty which threatens damage to the environment.

Next is the discretion of the tribunal for environmental salvage awards. Under existing Article, the reward is limited to expense as defined in the Convention. However, under the new proposal recovery is left entirely to the discretion of the Tribunal. For detail, the tribunal could assess an environmental award whenever there is a "threat of damage to the environment". The salvor does not have to actually prevent damage to the environment.

And as the experience over the last 100 years, an informed Tribunal is quite capable of considering the relevant factors to make a fair award and to satisfy relevant interests. Under the new proposal, the only difference is that the assessment is conversed from the damage or loss of the ship and cargo to the damage or loss of the environment.

Thirdly, the ship owner, but not the cargo interests, should pay for the environmental

salvage award, because the owner is liable for any pollution under modern Conventions and Laws. (Andreas Tsavliris, 2013)

Chapter 6 Conclusion and Recommendation

As discussed above, SCOPIC Clause, which is an alternative choice replacing Article 14 of the Salvage Convention for the "special compensation", is a useful clause. It is more advanced than the Salvage Convention. The advanced factors are as follows:

a) Protect the financial awards of salvors, if they fail to salve maritime property or salve a little, but achieve effort on the prevention of damage pollution to the environment.

b) Fix a 25% uplift based on the rate regulated on Appendix A

   It reduces the debate of special compensation between property underwriters and salvors.

c) Reduce the arbitration time

   - Reduce the data collection time of salvors to prove the salvage service;
   - Reduce the calculation time of salvage award because of the fixed rate regulated in Appendix A;
   - Designation of SCR system reduces the data collection of ship owners to verify the salvage service salvors proved;
   - Finally reduce the arbitration time, that saves money and time for both ship owners and salvors.

However, the SCOPIC Clause is not perfect. Despite the not fixed rate (such as the rate of professional craft), it has not resolved the special compensation problems. It means that the SCOPIC Clause is not a method of remuneration. It needs to be changed. So the recommendations are as follows:

- Wide training of familiar with salvage law especially the SCOPIC Clause should be done by ISU government and its members for salvage companies, so less dispute like that between Salvor A and the shipowner will happen;
- There should be an institute to statistic the market rate of those crafts and

equipments that are not fixed in the Appendix A of the SCOPIC Clause. And then reference price would be a conduct for the calculation of salvage awards;

- Further discussion should be done to solve the problem of environmental salvage awards. Maybe the discussion based on the "parallel remuneration" – calculating the property awards and environmental awards respectively - would be a good way.

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