



**REPUBLIC OF KENYA**

**IN THE HIGH COURT OF KENYA**

**AT NAIROBI (MILIMANI COMMERCIAL COURTS)**

**Civil Suit 111 of 2007**

**ARTESIAN (K) LIMITED .....PLAINTIFF**

**VERSUS**

**FIDELITY SHIELD INSURANCE CO. LTD .....DEFENDANT**

**J U D G M E N T**

The Plaintiff is a Limited Liability Company, which on 11<sup>th</sup> October 2005 was awarded a contract by St. Mary's Mission Hospital Nairobi, hereinafter the employer, to construct a 12 meter high Steel Tank Tower. The contract price was Kshs. 3 million. The Plaintiff, before embarking on the construction of the steel tower, took out a contractor's All Risks policy No. FCO13123954 for the contract price from Fidelity Shield Insurance Co. Ltd, hereinafter the Defendant. The Policy was scheduled to expire on the 30<sup>th</sup> November 2006.

The facts of the case are that on or about 29<sup>th</sup> April, 2006, the steel tank which the Plaintiff had constructed on the employer's land collapsed, damaging the steel tower and piping walls. The Plaintiff contends that the collapse was due to theft of bolts and angle sections at the site which it claimed was a risk covered under the Insurance Policy. The Plaintiff's claim which it lodged with the Defendant was not honoured. The Plaintiff has now sued the Defendant for breach of contract and seeks the insured sum of Kshs 3 million, together with interest from 29<sup>th</sup> November 2006, at court rates.

The Defendant has denied the Plaintiff's claim. It denied that the Insurance Policy covered the loss which occurred in this case.

The parties called witnesses and subsequently filed their submissions together with the cases relied on. I have considered the evidence adduced by both sides and submissions by Mr. Mwangi for the Plaintiff and Mr. Munyu for the Defendant. The parties filed a Statement of Agreed Issues signed by both advocates to the parties and it raises eleven issues which are:

- 1. Whether the contract of insurance insured loss occasioned by theft at the insured site?**
- 2. Whether upon concluding the construction of the tank, the Plaintiff undertook pressure testing?**
- 3. What was the effective cause of the loss the subject matter of this suit?**
- 4. Whether the effective cause of the loss was vandalism of bolts and angle sections of the**

walkway causing the half-full tank to collapse?

5. **If the answer to issue number 4 above is in the negative, whether the effective cause of the loss was a fault in design of the tank?**
6. **If the answer to issue numbers 4 and 5 is in the affirmative in either case, whether the Defendant is entitled to repudiate its liability to make good the Plaintiff's loss?**
7. **Was there a requirement for a joint investigation and technical assessment after the tank's collapse?**
8. **Whether by repudiating its liability under the contract of insurance, the Defendant is acting in breach?**
9. **Whether the Plaintiff is entitled to compensation from the Defendant and if so, what is the quantum?**
10. **Whether the Plaintiff is entitled to the reliefs sought in the plaint.**
11. **Which party should bear the costs of this suit?**

The counsels modified the issues for determination narrowing them down further. Mr. Munyu suggested that the lengthy filed Agreed Issues could be reduced to only two issues namely:

**Firstly, what was the effective cause of the collapse of the steel water tank: was it theft at the unsecured site or was it faulty design? Secondly, is the Defendant liable to compensate the Plaintiff?**

Mr. Mwangi on his part suggested the issues could be narrowed down to five issues. First issue states thus; **what was the real effective cause of the collapse of the first tank erected by the Plaintiff?** The second issue is: **What was the real effective cause covered by the policy?**

Issue suggested as number three is: **Is the Plaintiff estopped from relying on the alleged design not having asked for a design when taking out cover?**

The fourth issue is: **Is the Defendant entitled to rely on the unilateral assessment reports produced by the Defendant as D. exhibits 1, 2 and 3 in repudiating liability?**

Fifthly, **interest and the date of application.**

I think it makes good sense to stick to the Agreed issues.

The first issue: what was the effective cause of the collapse of the steel water tank can be considered together with issue No. 2: **whether and upon concluding the construction of the tank, the Plaintiff undertook pressure testing**; Issue number three: **What was the effective cause of the loss the subject matter of this suit**; Issue No. 4: **Whether the effective cause of the loss was vandalisation of bolts and angle sections of the walkway causing the half-full tank to collapse**; Issue No. 5: **If the answer to issue number 4 above is in the negative, whether the effective cause of the loss was a fault in design of the tank**; Issue No. 6: **If the answer to issue numbers 4 and 5 is in the affirmative in either case, whether the Defendant is entitled to repudiate its liability to make good the Plaintiff's loss**; Issue No. 7: **Was there a requirement for a joint investigation and technical assessment after the tank's collapse**; Issue No. 8: **Whether by repudiating its liability under the contract of insurance, the Defendant is acting in breach**; and issue No. 9: **Whether the Plaintiff is entitled to compensation from the Defendant and if so, what is the quantum?**

According to the Plaintiff, the cause of the collapse of the tank was theft of important bolts which

loosened the steel structure and caused it to cave in and collapse. In support of this contention the Plaintiff's first witness Mr. Kiruka, the Managing Director of the Plaintiff's company, informed the court that he is an Engineer by profession. This witness built a sample model of the structure erected at the employer's site and used that model to explain to the court the finer details of the work that he did, and to identify the various parts of the structure to make it easier for the court to understand. Eng. Kiruka painstakingly took the court through every detail of the structure and explained what was entailed in the construction. In addition, Eng. Kiruka, also produced the designs he used to put up the structure in question. The witness explained that the designs had been prepared for that purpose by Mugi Steel Structures in which Mr. Wachege was the consultant. The designs were Plaintiff Exhibit 2.

Eng. Kiruka testified that as requested by his employer, he put an elevated Steel Tank, ten meters above ground level, with a capacity of cubic 87 metres of water. Eng. Kiruka testified that when the tank collapsed on 29<sup>th</sup> April, 2006 it was exactly one month and five days after the completion and fabrication of the tank. Eng. Kiruka explained that by that time, the tank had undergone pressure testing severally. He stated that he visited the site to inspect, one day after the collapse of the tank. He testified that at the time he arrived at the site the scene had been guarded continuously for 24 hours from the time of the collapse of the tank. He stated that from the mangled structure he found at the site, the bracing, bolts and struts were missing from structure which were no where to be found in the vicinity. Eng. Kiruka testified that someone had climbed up the structure and had removed the braces and bolts leading to the collapse of the tank. Eng. Kiruka testified that the cause of collapse was not a design failure but was as a result of theft which was a risk covered under the Policy of Insurance.

The Plaintiff's 2<sup>nd</sup> witness was Francis Wachege a Civil Engineer who prepared the design for Eng. Kiruka for the construction of the tank in question. It was his evidence that he prepared the design and passed them over to a Senior Engineer for confirmation before releasing them to the Plaintiff Company for fabrication. Mr. Wachege denied that there was any design failure or error failure on the drawings. He also overruled the report by Eng. Ofwa, made on behalf of the Defendant.

The 3<sup>rd</sup> Plaintiff's witness was Mr. Benson Mutua Muiya a Senior Claims Officer with Prime Movers Insurance Brokers Limited, the brokers for the Defendant Company through whom the Plaintiff obtained the Insurance Cover. The significance of the evidence of this witness was twofold; he confirmed the existence of the Policy of Insurance and also confirmed that a loss occurring as a result of theft was covered under the Policy. Secondly, Mr. Muiya contended that if there was any fault in the design, the same should have been captured at the time of entering into the policy in question and should not have been raised at the time when the claim was made. Mr. Muiya contended that the Insurance Company should have gone to the site to inspect the site and should also have made enquiry as to the negatives and the drawings in order to confirm the genuineness of the documents as against the Bill of Quantity before entering into the Insurance Contract.

On the Defendant's part, the Defendant relies on an investigation report which was prepared by its second defence witness, Engineer Thomas Ofwa. According to the report of Eng. Ofwa the cause of the collapse of the tank was error in design which he set out as follows:

- (i) *The Plaintiff failed to rely on technical drawings availed in July and October 2006 to prepare Bills of Quantities for the steel structure.*
- (ii) *The contractor provided for a concrete base [2.0x2.0m thick] that could not fit into the excavated space [1.8x2.0m deep].*
- (iii) *The Plaintiff in its design of the steel structure provided for inadequate angle bracings to withstand the un-factored loads at the time of collapse.*
- (iv) *The Plaintiff provided for inadequate horizontal diagonal bracing marked "RB-X" which could not provide any significant structural restraints.*
- (v) *The Plaintiff's design and erection of the steel structure was not in consonance with the procedures*

*set by relevant Professional Regulating Bodies/Authorities.”*

Engineer Ofwa testified that he carried out structural analysis and discovered the following design errors which led him to conclude that the steel tank collapsed due to a faulty design.

1. Group RB 3 – 4 failed the test.
2. Group RB-x (Angles) failed the test.
3. The foundation hole indicated in the Plaintiff’s drawings was smaller than the material provided for the construction.
4. The angel bracings were required to be 75 x 75 x 6 mm. The Plaintiff however indicated that he changed this and used two pieces of 65 x 65 x 6 mm each. No approval or authorization from the client architect was obtained.
5. No minutes of site meetings were availed as required.
6. No design calculations were provided and no written approvals were availed.
7. The bracings used were not of the right sizes and these were over stressed leading to collapse of the tank.
8. There was no evidence that the Plaintiff procured approval of the design from the client architect, that is the architect for St. Mary’s Hospital as required.
9. No Municipal Council approvals were procured as required.

Engineer Ofwa disputed the allegations by Engineer Kiruka that the collapse was caused by theft of bolts. He stated that the Plaintiff was expected to provide 24 hours of security and if there was any theft the Plaintiff would have been able to discover it earlier. Secondly, the report of theft was made on the 4<sup>th</sup> May, 2006 which was five (5) days after the tank had collapsed.

I have considered the evidence that has been adduced by both the Plaintiff and the Defendant in support of their varying positions. The question as to what caused the collapse of the tank is a question of fact. The onus is on the Plaintiff to prove its case on a balance of probabilities. Among those who testified in this case, only Engineer Kiruka had visited the site soon after the collapse. His evidence was that he was able to tell from the manner in which the tank had collapsed and from the fact of missing bolts and struts in the upper section of the structure, that the missing bolts were the cause of the collapse of the tank.

The Defendant has relied on the evidence of Engineer Ofwa who never visited the site. The Defendant relied more on his technical knowledge, being a Structural Engineer and having been given the designs to examine and to form an opinion as to whether they were sufficiently safe for the construction of a steel tank. The Plaintiff on its part also relied on a report by Trans Europa Assessors (K) Limited which was produced by the Defendant’s witness Raphael Ojuondo the 1<sup>st</sup> Defence witness as its Exhibit No. 1.

According to the evidence of Mr. Ojuondo, after his firm Trans Europa Assessors was unable to determine the cause of the collapse of the steel tank, they engaged the services of Engineer Thomas Ofwa as a consultant to assist them to establish the cause of the collapse. Mr. Ojuondo testified that based on the findings of Eng. Ofwa, his firm wrote to their instructing client, the Defendant in this case, by a letter dated 16<sup>th</sup> November, 2006. That letter is defence exhibit No. 2. In that letter Mr. Ojuondo testified that they gave a summary of the conclusions and recommendations based on the report by Eng. Ofwa as follows: -

**“Recommendations**

***The following recommendations were also put forward:***

***The Project/Client, St. Mary's Hospital, should be requested to provide the drawings and all other relevant documents/information (in his custody) for the collapsed structure for any further investigations deemed necessary.***

***In case there are similar incidences of structural failures in future, an investigator should be immediately engaged before the debris are removed from their positions of failure/collapse, within limits of safety to life, to facilitate ease of investigations.***

***- Designs and construction/erection works should be executed as per the procedures set by relevant Government Professional Regulating Bodies/Authorities."***

I perused the report by Eng. Ofwa which is D. exhibit 3 and I noted that among the information that he considered before making his report included a report by Mr. A. Muhoro whom he identified as a Consultant. According to Eng. Ofwa's report, the report by A. Muhoro was availed by Trans Europa Assessors. A. Muhoro appears to have been engaged by Trans Europa to assist them in the investigation as to the cause of the collapse of the tank. That report is set out in full hereunder:

**"Damage to elevated water storage tank on 29<sup>th</sup> April 2006**

***Fabrication of the tank structure started on the fifteenth of October 2005 at the contractors yard. The erection of water tank on site commenced on the first of November 2005 and completed on the fifteenth of March 2006. The tank was loaded with water for testing over several days and was filled up overflow on the twenty sixth of March 2006. No leak or failure was noted. The water was subsequently used and other fillings and uses followed.***

***The tank was fabricated and erected as designed with all the members, bolts, and gusset plates properly fixed.***

***On the fateful day, as the tank was being filled with water for the umpteenth time, I was informed that the tank had toppled. The tank toppled by overturning within the columns.***

***After the failure, we examined the debris and the following was observed: -***

***1) Concrete Footing.***

***The levels of the concrete footings were taken and no differential in the levels between the four footings was noted. The concrete footing did not show any sign of failure, and the columns were still firmly fixed to the footings.***

***2. Columns (150 x 150 x 4 mm RHs).***

***The columns at the time of inspection were still upright with the tank stuck between the four columns, where the tank was resting, there was notable buckling of the columns.***

***All the gusset plates welded on to the columns were intact. And no shearing or weld failure was noted.***

***Some struts and ties were still holding onto the columns.***

***3. Struts and Ties.***

***These are the members joining the four columns together at 2.4m centres.***

***While some random ties and struts were still holding onto the columns, some were missing, notably the ties at the top of the columns. A few other ties had their fixing bolts missing while showing no sign of***

*shearing, twisting or buckling.*

4) *Secondary and Primary Beams (The Deck).*

*The deck comprising of five primary and two secondary universal beams, was thrown intact to the ground. Out of the sixteen bolts holding the deck to the columns, six bolts had sheared, most probably during the thrust. Other bolts could not be found.*

5) *The tank.*

*The tank toppled between the columns and landed half way upside down twisted. The top cover was thrown a few meters away, while all the tank joints and bolts were intact despite the twisting due to the thrust.*

6) *Conclusion.*

*There has been reported to the local police station, cases of bolt theft on the railway line near the tank site. We also noted several bolts, ties and struts were missing on the collapsed structure.*

*The tank tower collapsed due to loss of some critical ties in the top half of the columns, together with the loss of bolts holding the deck to the column, and also the bolts to the ties bracing the columns.*

*The loss of the critical ties fixity caused the columns to buckle thus titling the half full tank and hence causing it to topple.*

*Due to the thrust, majority of the steel in the structure got twisted rendering them not good for reuse, other than for scrap metal.”*

Considering that report, it is clear that Trans Europa’s initial report, D. exhibit No. 1, took into consideration Mr. A. Muhoro’s report among other reports. At page 8 of Trans Europa report, they state:

***“We also consulted with other independent contractors/Civil Engineers on the same and they concur that it was impossible to immediately determine the exact cause of the collapse.”***

Another important thing I noted in regard to Mr. A. Muhoro’s report is the fact he had visited the site immediately after the collapse and before it had been tampered with, just as Eng. Kiruka had done. The results of his investigations is contained in the report set out above. The report was therefore not based on impressions or abstract analysis as was the case with Eng. Ofwa.

I considered the evidence of Ojuondo Nguta, Defence witness No.1 According to Mr. Ojuondo it is Trans Europa which had engaged the services of Mr. Muhoro who is a Consultant Engineer. Mr. Ojuondo testified that after receiving the report of Mr. A. Muhoro, Trans Europa rejected it because they did not agree with the conclusions, and that instead they engaged the services of Eng. Ofwa whose report, according to them, was acceptable. It is very clear that Trans Europa had consulted A. Muhoro before consulting Eng. Ofwa and that the only reason why they changed their findings from the initial report, D. exhibit 1, to the subsequent one, D. exhibit 2, was their decision to reject Mr. A. Muhoro’s report and accept Eng. Ofwa’s report. It is therefore clear that their initial report was based on Mr. Muhoro’s findings while their subsequent report is based on Eng. Ofwa’s findings.

As I observed earlier in this matter, the findings by persons who visited the scene cannot be controverted by findings based on abstract analysis in the Computer room. I must mention here my observation that Eng. Ofwa did not produce before the court the drawings or plans he analysed to come to these conclusions.

Mr. Mwangi for the Plaintiff also raised a second issue regarding the evidence of Eng. Ofwa, to the effect that he did not disclose a possible conflict of interest. Mr. Mwangi contended that Eng. Ofwa had

privately been instructed by a party, who is not party to these proceedings, to peruse and advise on the Plaintiff's drawings. Eng. Ofwa was confronted with that fact and his position was that there was no conflict of interest. Mr. Munyu on his part submitted that his witness did not attempt to conceal the fact that he had been consulted by another party prior to his engagement on behalf of the Defendant. Mr. Munyu contended that Eng. Ofwa disclosed that fact in his report. On my part I think that Eng. Ofwa ought to have disclosed to the Defendant that he had been engaged by a different party to study the drawings by the Plaintiff in order to give advice, so that the Defendant would determine whether they could engage his services. Having been engaged to advise on the Plaintiff's drawings by another party, prior to his engagement by the Defendant in this case, there is a glaring conflict of interest and a possibility of bias, having already formed an opinion in regard to the same drawings for a different party. Eng. Ofwa ought to have declined to take up the new assignment by the Defendant. It is instructive to note that Trans Europa who are the agents of the Defendant preferred Eng. Ofwa's report to that of A. Muhoro whom they had engaged earlier.

Mr. Mwangi has urged the court to find that it was not sufficient for the Defendant to cast aspersions on the Plaintiff's evidence that the cause of the collapse of the tank was theft of bolts since the Defendant did not adduce any evidence to show that what the Plaintiff was contending was not true. For that proposition Mr. Mwangi relied on the case of **Johnson M. Mburugu v. Fidelity Shield Insurance Co. Limited [2006] eKLR**. It was a case involving an Insurance Company and its insured. The Plaintiff in that case was claiming from the Insurance on ground that the vehicle which he had insured with them was stolen. The Court of Appeal observed as follows:

***“We have considered the above findings and conclusion anxiously. In our view, we do not share the learned Judge's views that the respondent was at a disadvantage as to the allegations of theft and therefore could not tender any evidence to show that theft never took place. It cannot escape one's mind that unlike such pleadings where the respondent would have simply denied the allegation of theft and put the appellant to strict proof of the same allegation, in this case, the respondent was positive and stated in its statement of defence at paragraph 6 and 7 which we have reproduced hereinabove and which the learned Judge also reproduced in his judgment that there was no theft of the motor vehicle as alleged or at all. That statement by the respondent was positive and the respondent assumed the onus of showing that the alleged theft of the subject motor vehicle was a figment of the appellant's fertile imagination or that the appellant was an outright liar. It could not in the end leave the whole matter to merely raising suspicion on the theft theory through alleged inconsistencies in the evidence of the appellant and his witnesses. The respondent, for instance, needed to show that it made inquiries through police or through professional investigators and found that the vehicle was not stolen as alleged or was not stolen at all, or was instead hidden somewhere by the appellant.”***

I have looked at the plaint. At paragraph 13, the Plaintiff averred as follows:

***“Upon inquiries and consultations with the Plaintiff's consultants, the Plaintiff established that the effective cause of the loss and damage was vandalizing of bolts and angle sections of the walkway causing the half-full tank to collapse/sink leaving the tank joint columns intact though twisted.”***

The Defendant in response denied the averment made in paragraph 13 of the plaint. In paragraphs 8 and 9 of the defence, the Defendant avers as follows:

***“8. The Defendant denies the averments made in paragraphs 13 of the plaint and specifically denies that the effective cause of the loss and damages was vandalizing of bolts and angle sections of the walkway to the steel tank as alleged or at all and the Plaintiff is put into strict proof thereof.***

***9. The Defendant states that investigations and technical assessment of the loss by the Defendant's appointed loss assessors in collaboration with an engineering investigator revealed that the collapse of the steel tank was as a result of faulty design.”***

The Defendant did not just deny that the tank did not collapse as a result of theft but went further and stated that the cause of the collapse was faulty design.

Regarding the opinion by Eng. Ofwa and his conclusion that there was an error in the design, Eng. Kiruka and Eng. Wachege did not agree with him. Eng. Wachege who was the Civil Engineer who did the structural drawing for the water tank in issue testified that there was no error in the design that he prepared. Mr. Wachege stated that in regard to the comment that the Plaintiff provided for inadequate horizontal diagonal bracing marked "RB-X" which could not provide any significant structural restraints. Eng. Wachege stated that he could understand the comment but stated that in that drawing he provided the same size of RB-X of 65mm for which there was no significant structural effect as all the RB's were connected by bolts which were fastened on gusset. Eng. Wachege explained that what he provided for in the drawing was adequate to support the structure and that both the primary and secondary beams in the structure has sufficient height and thickness and that all the beams were bolted on to the main beams of the structure and joined by welding.

In regard to Eng. Ofwa comments that the design and erection of the steel structure was not in consonance with the procedures set by relevant Professional Regulating Bodies/Authorities, Eng. Wachege testified that it was not necessary for the design to have been submitted to the local authority for approval. Eng. Wachege stated that since the structure was part of other construction that was going on at the site, the requirement was for the design to be submitted to the Architect of the site for approval as to the site location.

In regard to Eng. Ofwa's comments that the design of the steel structure provided for inadequate angle bracings to withstand the un-factored loads at the time of collapse, Eng. Wachege testified that, that criticism was partial because Eng. Ofwa was criticizing the provision of bracings of 65mm instead of the 75mm ones but that Eng. Ofwa disregarded the fact that the design provided for two bracings of 65mm which in effect made the structure stronger.

Eng. Kiruka also made his comments regarding the alleged errors in the design. On his part, he stated that he provided all the structural drawings for the tank to the Defendant through its agent before they entered into the Insurance Policy Agreement. Eng. Kiruka produced a certificate which was P. exhibit 10 which was a manufacturer's certificate of warranty for the tank. It certified that all the materials used for the construction of the tank met the required standards. Eng. Kiruka differed with the conclusion that the most probable cause of the loss was the fault in design as Eng. Ofwa put it. First of all Eng. Kiruka stated that Eng. Ofwa was not sure since it was stated that the exact cause of the collapse could not be determined and the conclusion that the most probable cause was the fault design was only a speculation. Eng. Kiruka has stated that he used the earth beams as per the design and that all the materials that he used and the measurements were adequate and that there was no inadequacy in the structure. He gave technical details of how he constructed the tank which was in accordance with the drawings and the design. Eng. Kiruka testified that as proof that there was no error in design he constructed two other tanks at the same site using the exact same design without any modifications except that he welded the bolts to the struts and the beam to prevent vandalism. Eng. Kiruka said the welding of the bolts onto the structure had no structural effect neither did it make the structure any more stronger than if the welding had not been done and that therefore the structure he had constructed at the beginning was adequate as proved in the latter two constructions.

Regarding the concrete base contractor provided for a concrete base [2.0x2.0m thick] that could not fit into the excavated space [1.8x2.0m deep), Eng. Kiruka refuted that finding. He said that there was no way that a concrete base of 2x2 m would have fitted into an excavated base of 1.8x2m as alleged in Eng. Ofwa's report. He said he excavated a space of 2x2 m in order to fit the concrete base of 2x2 m. In my own view, Eng. Ofwa's conclusion that the excavated space was 0.2m less than required must have been speculative as he did not visit the site to confirm that finding.

In regard to the technical drawings availed in July and October 2006 to prepare Bills of Quantities for the steel structure, Eng. Kiruka stated he relied on the technical drawings that he availed in July 2006 to prepare the Bill of Quantities for the Steel Structure. He also stated that he did not agree with the comment by Eng. Ofwa that the drawings he submitted to the insurance was not dated as the one he submitted was dated 12<sup>th</sup> October, 2005 and that at that time no one informed him that his drawing was undated or that the drawing had been rejected.

The Plaintiff has adduced evidence to show that there were missing bolts and struts and that the same led to the collapse of the tank. The evidence that there were bolts missing from the collapsed structure was by Eng. Kiruka after he visited the site and inspected the collapsed tank. That evidence received support from the report by A. Muhoro which was produced by the defence, and which states that certain bolts were never found at the scene and which report concluded that the possibility of vandalism could not be overruled.

The Defendant on the other hand has pleaded specifically that the collapse of the tank was as a result of faulty design and not theft of bolts as alleged. In support of that evidence the Defendant relied on the findings by Eng. Ofwa which, as I have stated in the body of this judgment, was based on abstract analysis of drawings and designs through the computer, and impressions created out of such analysis. The actual results of this analysis are not before the court. What Eng. Ofwa produced is a small report titled '*Member Design for Axial Force*', which is Appendix 3 of this report. From his evidence Appendix 3 was the results of the modeling by the computer which he analysed using the computer and which led him to the conclusion that the bracings that were used in the structure, that is the 'RB' 65 x 65 x 60mm, had failed. According to Eng. Ofwa the RB3 and RB4 failed, but the rest of the RB passed the test. It is my view that the analyses carried out by Eng. Ofwa are machine analysis and are based on theories of standards not disclosed to court. These were based on scientific tests through computer, which in my view are abstract and therefore insufficient to support the Defendant's defence that there was no theft of bolts but that the cause of the failure and of the collapse of the tank was faulty design. In addition the analyses carried out were not based on the Plaintiff's drawings and designs. Their results can not apply to the case and neither are the results of any assistance to this case.

Mr. Mwangi has urged the court to reject the Defendant's reliance on the theory of faulty design as the cause of the collapse of the tank on grounds that the Defendant, having not sought the designs and the drawings before giving the cover is estopped from relying on that ground. In support of that preposition, Mr. Mwangi relied on the case of **Parklands Shade Hotel Ltd. vs. Kenya Alliance Insurance Co. Limited & Anor., Milimani Civil case No. 281 of 2002** where it was held:

***"If the description of the position of a senior cashier over and above the position of cashier was so material to the 1<sup>st</sup> defendant there is nothing that shows that they did inquire about it either with the broker or the insured. Instead they merrily and happily accepted premiums from the plaintiff year in and year out until 2000 when the theft occurred. They promptly sent risk surveyors and risk adjuster to make the inquiries after the event. In addition the 1<sup>st</sup> defendant did not ask for an establishment chart of the plaintiff although the insurance was admittedly taken on position basis and not on name basis."***

Mr. Munyu for the Defendant submitted that the burden lay on the Plaintiff to prove that the cause of the collapse of the tank was theft of the bolts and that such burden cannot shift to the Defendant. Mr. Munyu submitted that since the contract between the Plaintiff and the employer was "Design" and "Build" the Plaintiff bore the responsibility of the design and construction. Mr. Munyu submitted that the errors discovered by the Defendant were errors of the Plaintiff and that the same were errors on design which were excluded from the Insurance Policy. Mr. Munyu urged that one glaring defect was on the angle bracings used which was 65x65x6 mm instead of the 75x75x6 mm which according to Mr. Minyu meant that the Plaintiff altered the design without the Architects approval. For this preposition Mr. Munyu relied on two cases. He relied on the case of **Brickfield Properties Limited s. Newton [1971] 3 All ER 328** where Sachs L. J. stated:

***"The Architect is under a continuing duty to check that his design will work in practice and to correct any errors which may emerge."***

The case of **London Borough of Merton vs. Lowe [1981] 18 BLR 130 at page 132** thus:

***"I am now satisfied that the architects duty of design is a continuing one, and it seems to me that the subsequent discovery of a defect in design, initially and unjustifiably thought to have been suitable, reactivated or revived the architect's duty in relation to design and imposed upon them the duty to take***

***such steps as were necessary to correct the results of that initially defective design.”***

I find that the Plaintiff discharged his burden of proof that the cause of the collapse of the steel tank was the theft of the bolts. The Defendant on the other hand has not discharged his burden to show that the cause of the collapse of the tank was faulty design. The evidence adduced by Eng. Ofwa was based on abstract and theoretical analysis which were not disclosed. These were in my view not sufficient to dislodge the Plaintiff's case that there was no fault in the design. Eng. Ofwa narrowed down the cause of the collapse to failure by RB3 and 4 of the structure based on the argument that the bracings used were 65x65x6mm and not 75x75x6mm. Both Eng. Kuruka and Eng. Wachege contested Eng. Ofwa's findings and explained that Eng. Ofwa overlooked the fact that the bracings used of 65x65x6mm were double bracings and not single bracings of 75x75x6mm, and that therefore the finding that the structure was weakened by the use of the 65x65x6mm bracings could not have been correct. Eng. Ofwa's testimony in that regard was that the Plaintiff should have used what was provided in the drawings and that the size should have been double. He however stated that he did not work out the right sizes that ought to have been used. Eng. Ofwa also admitted in his evidence that the computer analysis which was Appendix 3 of his report, was not based on the Plaintiff's drawings which are exhibits 2a to 2h. He stated that he did not use the Plaintiff's drawings because in his view they did not tally. In regard to the concrete base, this was very easy to verify by visiting the site to ascertain whether the excavated space was smaller than the concrete base. No evidence was therefore adduced to establish this allegation.

Having carefully considered the evidence of the witnesses, it is my view that the decision lies in determining which of the two witnesses can be believed. On the one hand, we have the Plaintiff's witness Eng. Kiruka who visited the site soon after collapse. According to his evidence, he concluded that the collapse was as a result of missing bolts. Eng. Kiruka's evidence was that at the site he found that the entire tank had collapsed and the tank plates were strewn all over the area of the site. He says that the steel tower though twisted was still firm and intact and that so was the concrete that was holding the tank at the bottom. He testified that he noted that some bolts around the top area of the structure some ties and struts, RB3 and RB2, RB1 and RB4 were missing at the top part of the structure and he concluded that the only cause of the failure would have been the removal of the bolts holding the ties and struts to the column which had been removed from the top most ties, struts and bolts.

I have considered the uncontroverted evidence of the Plaintiff that he had completed the construction of the tank on 20<sup>th</sup> March, 2006 and he had done pressure testing of the tank between 21<sup>st</sup> and 26<sup>th</sup> March, 2006. The pressure testing involved filling the tank with water at different levels in a successive manner in order to test whether it would be able to hold the weight of the water. By the 26<sup>th</sup> March, 2006, Eng. Kiruka testified that he had already tested the tank with the full water capacity. He testified that the collapse occurred on the 29<sup>th</sup> April 2006, which was exactly one month and six days after the said testing.

The only other people who visited the site were Mr. Ojuondo's team mates, that is Mr. Murgor and Mr. Kamal Patel of Trans Europa Assessors (K) Limited. After they visited the site they came up with the report Defence Ex. 1 whose conclusion was as follows:

***“In a bid to corroborate the circumstances and nature of this claim, we independently carried out the inspection of the damaged tank and at the end of the exercise noted the following pertinent information:***

***The tank is located next to sparsely populated human settlement and other few construction sites. Considering that the construction sites are not abound with activity, we did not rule out the possibility of sabotage by the locals and/or attempted theft in view of the area being remotely located. Police officers from Gilgil Police Station who visited the scene also confirmed the position however; they have marked their case file on the same as pending under investigations. (Refer to attached Police Abstract report).***

***In view of the force exerted by escaping water from collapse of the tank, the steel mast support structure, including the tank were completely destroyed. It is important to note that at the time of loss***

***the tank was ½ of the total storage capacity. We captured photographs of the damages while at the site and are annexed to this report.”***

It is very clear that the persons who visited the scene, according to their report, did not rule out sabotage and in particular an attempted theft of the tank itself. After that investigation they involved the services of an Engineer as a consultant as stated above. Out of the two reports they obtained by the Consultants, they accepted only one, the one by Eng. Ofwa. On receiving the one by Eng. Ofwa they wrote to their instructing client who is the Defendant, the letter dated 16<sup>th</sup> November, 2006 and produced as D. exhibit 2. In that letter the conclusions and recommendations that were stated therein were lifted from the report of Eng. Ofwa, whom they had engaged to assist them in their investigations. It is instructive to note that consultant A. Muhoro’s report which they rejected, was based on investigations carried out by him at the site of the collapsed tank, soon after the tank collapse.

Eng. Ofwa testified before the court and I had the opportunity to examine his demeanour. He impressed the court as an honest witness just like Eng. Kiruka was. His evidence was however based on theories. I have considered his evidence in court and the report that he produced as D. Ex. 3. It is quite clear that Eng. Ofwa did not visit the site and that the investigations he carried out, the conclusions that he had deduced as reduced in his report before the court were based on an investigation methodology which he has set out at page 1 of his report as follows:

***“Investigation methodology***

***This report is based on the availed relevant background information, observations made on various photographs of structural elements and deductions drawn from the results of the structural analysis/design using relevant Design Codes and Standards.***

***The investigation entailed the following exercises:***

***§Collection of relevant background information on the structure;***

***§ Determination of the structural system, sizes and shapes of structural elements;***

***§ Identification of the nature and location of structural failures;***

***§ Photography of any observed failures at areas of structural significance;***

***§ Analysis of the structure to ascertain its capability to carry loads associated with its intended use at the time of the collapse, within the acceptable distress limits;***

***§ Drawing conclusions based on the above observations and analysis.”***

Theories and abstract analysis cannot replace observations and investigations carried out by experts at the site where an event occurred. Eng. Ofwa’s analysis cannot be used to

Having carefully considered the evidence of all witnesses, it is my view that the evidence of Eng. Kiruka that the cause of the collapse was theft of ties, struts and bolts at the top part of the structure, which led to the collapse of the steel tank, has not been shaken or controverted. This was eye witness evidence by a person with the relevant knowledge and skill to understand and deduce from what he saw at the site, what was the probable cause of the collapse. I do appreciate that Eng. Kiruka is the owner of the Plaintiff Company and the fact that he had direct interest in the outcome of this case. His evidence was however supported by findings contained in a Consultant’s Report, Mr. A. Muhoro. The report of Trans Europa was made by two officers of the Company, Mr. Anthony Omondi and Mr. Kamal Patel, who had also visited the site and who signed the report, which is Defence exhibit 1. In their observations of the site and of the surrounding area and of the human settlement around the site as lay men, they concluded that they could not rule out the possibility of sabotage by the locals and even an attempt of theft. With due respect to Eng. Ofwa, his report was based on availed background information, observations made on various

photographs of structural elements and deductions drawn from the results of structural analysis/design using the relevant design code and standards. The basis of his conclusions can be summed up as theoretical analysis, deductions and conjecture from analysis of documents and photographs, based on his engineering knowledge, skill and prowess. That, with due respect to this witness, cannot be used to annul conclusions that were reached by an equally qualified personnel after they visited the site and analyzed the structure itself, the beams, columns, bracings and the structural element which, were seen with naked eyes.

The findings of Eng. Ofwa were based on conjecture and impressions based on theories while that of Eng. Kiruka were based on a study of the actual site, the collapsed tank itself, and all the structures that go with it. On a balance of probability, I find that the Plaintiff's evidence is cogent, it is based on reality and eye witness evidence of an expert based on what was seen by this expert with the relevant knowledge and skill. From the evidence adduced, it is probable and reasonable to hold that the collapse of that tank was as a result of theft. I also considered the fact that Eng. Kiruka's evidence that he put up two new Steel Tanks with the same design without modification except for the spot welding is added corroboration of the Plaintiff's case that indeed the collapse of the tank could not have been a faulty design.

The issue that begs an answer is the one raised by Eng. Ofwa in his report; which is that the Plaintiff should have provided security for the site during the period of construction. Eng. Kiruka answered this issue when he testified that security was provided between the Plaintiff and the employer, each taking 12 hours. The Plaintiff was providing security during the days while the employer provided security during the night. My only reaction is that even if there was a lapse in the security of the site, that would not disentitle the Plaintiff of this claim, as there is no evidence to show that there was a lapse and that if there was any it was caused by his servants or agents.

There was another issue which arose in this case, that is the issue of spot welding of the bolts and nuts. Eng. Kiruka said that when he constructed the 2<sup>nd</sup> and the 3<sup>rd</sup> tank, for the employer he did spot welding of all the bolts in the structure of the tank in order to prevent vandalism. I agree with the Plaintiff that there was no requirement that bolts should be spot welded. In any event failure to spot weld the bolts in my view is not evidence of negligence as there is no evidence that welding of the bolts increased the strength of the structure at all. In fact Eng. Wachege's evidence was that spot welding had no effect on the structure of the Steel Tower. I find that the omission to weld the bolts in the collapsed tank cannot be used to disentitle the Plaintiff of its claim against the Defendant to avoid this claim.

A strong case was made by Mr. Muiya of Prime Movers Insurance Brokers Limited, who are the brokers for the Defendant. They were the ones who provided the Policy of Insurance the subject matter of this suit to the Plaintiff as Agents of the Defendant. Mr. Muiya who is an expert in insurance matters proposed that it was too late for the Defendant to rely on faulty design to avoid the policy since the Defendant ought to have captured the fault in the design at the time the Insurance Contract was being signed. It was Mr. Muiya's evidence that before the Defendant entered into the insurance contract with the Plaintiff it ought to have visited the site, carried out an inspection and a comparison using the negatives, the drawings and the Bill of Quantities in order to satisfy itself as to the genuineness of the documents. Before entering into the contract. That is the doctrine of Equitable stoppel which Mr. Mwangi relied on and for which he cited the case of **Parklands Sahde Hotel Ltd, supra.**

Mr. Muiya's raises the application of the principle of equitable estoppel. This is to the extent that the Defendant company having accepted to cover the Plaintiff as against loss in line with the Terms and Endorsements in the Insurance Policy based on the information given to them by the Plaintiff regarding the structure that he was going to put up for his employer. It cannot turn around and say that there was any default in the design of that structure in order to avoid the Plaintiff's claim. When it did not make it's a requirement nor clarify for itself that the Drainages and the Designs were good and fitting for the purpose they were intended before entering into the contract. In **Central London Property Trust –vs- High Trees House** cited with approval at page 5 of **Kay Jay Rubber Products Ltd –vs- Development Finance Co. of Kenya ltd & Another CA No. 55 of 1989**, Hancox CJ Masime and Cocker JJA Lord Denning described Equitable Estoppel as follows:

**“If the defendant” (in this case DFCK).....” led the plaintiff to believe that he would not insist on the stipulation as to time and that if they carried out the work, he would accept it, and they did it, he could not afterwards set up the stipulation as to the time against them. Whether it be called waiver or ..... On his part ....it is a kind of estoppel. By his conduct he evidenced an intention to affect their legal relations.”**

I find that having not made Design an issue by having failed to make inquiry and satisfy itself of the fitness of the Designs the plaintiff was to use for the construction of the tank, the Defendant is estopped from relying on that ground.

The other issue is whether the Defendant is entitled to repudiate its liability to make good the Plaintiff's loss. The simple answer to this issue is that the Defendant is not entitled to repudiate its liability. The cause of the collapse of the tank was theft of bolts and nuts which was covered under the Policy of Insurance. Under the Policy of Insurance ‘Special exclusions to the material damage cover’ provided for exclusion loss or damage due to faulty design as one of the exclusions. I have specifically found that the loss or damage to the tank was theft of bolts and not faulty design. There was a specific clause on theft which provided as follows:

***“Theft Clause***

***Theft within the meaning of this policy shall mean theft following upon house breaking (causing actual forceable visible damage to the site, constructions Stores or premises or part thereof) and connected therewith or if there shall arise any damage to the said stores or premises, the property of the Insured or for which the insured is legally responsible, which shall be due to any such theft as aforesaid or any attempting threat, excluding theft by or with the connivance or any of the family, construction staff, or domestic servants or the insured or any other person lawfully on the construction site, store or premises.”***

The Defendant has therefore no right to repudiate its liability under the policy. I find that the Defendant is bound under the contract to indemnify its insured, the Plaintiff, in respect of the loss or damage as suffered as claimed in this case.

The Plaintiff claims Kshs.3m less Kshs.200,000/- salvage. Mr. Ojuondo Nguta, the Defendant's 1<sup>st</sup> witness testified that the sum recoverable under the Insurance Policy was the sum insured less salvage value assessed at kshs.250,000/-, less excess of Kshs.20,000/- and 15% deductibles. He did however admit that 15% deductible was not provided for under the policy in question.

Having considered the evidence adduced before me I find that the sum recoverable by the Plaintiff under this Policy is the insured sum of Kshs.3 million, less the salvage of Kshs.250,000/, less the excess of Kshs.20,000.

I enter judgment for the Plaintiff against the Defendant;

**1. In the sum of Kshs. 2,730,000/-.**

**2. Interest at court rates from 29<sup>th</sup> November, 2006 until payment in full together with the costs of the suit.**

**Dated at Nairobi this 26<sup>th</sup> day of June, 2009.**

**J. LESIIT,**

**JUDGE**

**Read and signed in presence of:**

Masinde holding brief for Mr. Mwangi for the Plaintiff

Munyororo holding brief for Mr. Munyu for the Defendant

**Dated at Nairobi this 17<sup>th</sup> day of July, 2009.**

**J. LESIIT,**

**JUDGE**