CISG-online 740	
Arbitral Tribunal	Nederlands Arbitrage Instituut (Netherlands Arbitration Institute)
Date of the decision	15 October 2002
Case no./docket no.	2319
Case name	*Rijn Blend oil case*

In the proceedings referred to above between:

- ON THE ONE HAND, the following Claimants ...: *C. BV*, a company incorporated under the laws of The Netherlands and having its office at ...The Netherlands; and *D. BV*, a company incorporated under the laws of The Netherlands and having its office at ...The Netherlands; and *D.A. BV*, a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *D.B. BV*, a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *E. BV*, a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *N. BV*, a company incorporated under the laws of The Netherlands and having its office at ...The Netherlands; and *O. BV*, a company incorporated under the laws of The Netherlands and having its office at ...The Netherlands; and *O.A. BV*, a company incorporated under the laws of The Netherlands and having its office at ...; and *V.Inc*., a company having its office at ...; and *X*., a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *X.A*., a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *X.B*., a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands; and *Y. BV*, a company incorporated under the laws of The Netherlands and having its office at ... The Netherlands. [sellers] referred to above all being represented by Mr. B.E.L.J.C. Verbunt and Mrs. L.A. Zima, attorneys-at-law, with office at Weena 666, Rotterdam, The Netherlands; and

- ON THE OTHER HAND, [Respondent] Z. Ltd., ... a company incorporated under the laws of England, with registered office at ... England, represented by Mr. P. Roorda, attorney-at-law in Amsterdam with office at Strawinskylaan 2001, Amsterdam;

the following arbitral award is rendered.

[For purposes of this presentation, Claimants are referred to as [sellers]; Respondent is referred to as [buyer].]

1. Procedure

[1]
On May 30, 2000, [sellers] filed a request for arbitral proceedings (with enclosures) with the Netherlands Arbitration Institute [NAI] against [buyer].

[2]
In accordance with the NAI Arbitration Rules, [buyer] filed its short answer on July 5, 2000.

[3]
On September 20, 2000, Mr. F.H.A.M. Thunnissen, Deputy Administrator of the Netherlands Arbitration Institute, nominated the following three arbitrators in accordance with the list procedure of article 14 of the Arbitration Rules:

Prof. Dr. F. De Ly, Johan Buziaulaan 33, Utrecht;

Mr. E.J. van Sandick, Zandvoorterweg 52, Aerdenhout;

Ir. L. Tjioe, Sir Winston Churchilllaan 283/49, Rijswijk (ZH).

[4]
All arbitrators accepted their appointment in writing.

[5]
On September 28, 2000, the Arbitral Tribunal confirmed to the parties that the arbitration was to proceed in accordance with the Arbitration Rules of the Netherlands Arbitration Institute in the English language and with Rotterdam as place of arbitration. It also confirmed that Professor De Ly would act as secretary of the Tribunal and set deadlines of six weeks for the submission of statements of claim and of defence.

[6]
On October 11, 2000, the Deputy Administrator notified [sellers] that a deposit of *DFL* [Dutch florins] 20,000 was to be paid for the fees and disbursements of arbitrators.

[7]
On October 11, 2000, [sellers] requested an extension of the period for filing the statement of claim from six to nine weeks. [buyer] agreed to such extension by fax dated November 15, 2000.

[8]
On November 6, 2000, the Deputy Administrator confirmed receipt of the deposit for fees and disbursements.

[9]
On November 30, 2000, [sellers] notified that [buyer] had agreed to a further extension with one week for filing the statement of claim.

[10]
On December 8, 2000, the statement of claim (with enclosures) was filed.

[11]
On February 8, 2001, [buyer] notified the Arbitral Tribunal that [sellers] had accepted an extension with one week for filing the statement of defence.

[12]
On February 16, 2001, [buyer] filed its statement of defence and counterclaim (with enclosures).

[13]
On February 22, 2001, [sellers] requested to have an opportunity to file a statement of reply to [buyer]'s statement of defence and counterclaim and suggested statements of reply and rejoinder to be filed within respective periods of ten weeks. [Buyer] by fax dated February 23, 2001 agreed to this suggestion, provided that [sellers] would agree to submit some documents specified in the statement of defence. On March 6, 2001, the Arbitral Tribunal acknowledged receipt of all these letters and announced a decision within a period of two weeks. On March 8 and 9, 2001 respectively, [sellers] and [buyer]'s positions were further explained in a letter of their counsels. On March 16, 2001, [sellers] further replied to [buyer]'s letter dated March 9, 2001. On March 26, 2001, [buyer] replied to [sellers]' letter dated March 16, 2001 and requested a bifurcation of the arbitral proceedings.

[14]
On April 9, 2001, the Arbitral Tribunal granted the request for submission of statements of reply and rejoinder and set deadlines of one month. [Buyer]'s request for production of documents was granted and the Arbitral Tribunal reserved its decision as to bifurcation until after a hearing was to be held. Also, the Arbitral Tribunal requested the parties to identify the issues on which they were in agreement and invited the parties to express their views as to the interpretation of the relevant provisions of the Convention on the International Sale of Goods.

[15]
On March 6, 2001, the Deputy Administrator informed [buyer] that administration costs of Euro 11,900 were due by reason of the filing of a counterclaim. On March 12, 2002, payment of these administration costs was confirmed.

[16]
On March 12, 2001, [sellers] informed the Arbitral Tribunal that N. BV had been replaced by Y. BV regarding the arbitral proceedings by virtue of a transfer of interests in the production licenses for Blocks P11a and P14a on the Dutch continental shelf.

[17]
On May 10, 2001, [sellers] filed their memorial of reply and statement of defence in the counterclaim (with enclosures). In their cover letter, they informed the Arbitral Tribunal that O.A. ... BV had merged with O. BV. Under the merger, the latter company had ceased to exist. Also, O.A. ... BV had changed its name into O. BV. For the purposes of the arbitration, the renamed company O. BV is to be considered to hold the interests of the two abovementioned [sellers]. Finally, [sellers] informed the Arbitral Tribunal that X. had changed its name into ... BV.

[18]
On June 1, 2001, [buyer] informed the Arbitral Tribunal that [sellers] had agreed with an extension until June 18, 2001 of the deadline for the submission of their statement of rejoinder.

[19]
On June 7, 2001, the Arbitral Tribunal informed the parties that a hearing would take place in Rotterdam on June 29 at 1:30 p.m.

[20]
On June 6, 2001, [buyer]'s counsel sent a fax regarding the format of the scheduled hearing.

Apparently, that fax crossed the Tribunal's letter dated June 7, 2001. On June 15, 2001, the Tribunal replied to the June 6 fax and attempted to address the issues raised as to the format of the hearing.

[21]
On June 18, 2001, [buyer] filed its memorial of rejoinder and memorial of reply and amendment of the counterclaim (with enclosures).

[22]
On June 29, 2001, a hearing took place in the presence of representatives of most of the [sellers], their counsels, a representative of [buyer] and [buyer]'s counsels. During the hearing, some documents were submitted as well as pleading notes. At the end of the hearing, the issue as to the way forward in the arbitration was discussed with the parties and further procedural arrangements were made.

[23]
Pursuant to the arrangements made at the hearing, the following documents were submitted: 1) a letter dated July 13, 2001 on the part of [buyer] commenting on the issues of admissibility and evidence; 2) a memorial of rejoinder in the counterclaim dated July 15, 2001 and filed by [sellers]; 3) a letter dated July 30, 2001 on the part of [sellers] commenting on the issues of admissibility and damages, arm's length character of the sales of Rijn Blend to H. ... BV, contents of Tank 101 and arbitration costs; and 4) a statement following procedural hearing dated August 1, 2001 filed by [buyer].

[24]
By letter dated August 21, 2001, the Arbitral Tribunal gave the parties an additional opportunity to express their views before September 21, 2001 regarding all the elements of the case. It also dismissed [sellers]' objections against modifications of the counterclaim. It provided that, unless the parties were to provide otherwise, it might render a final award if that were possible and efficient.

[25]
Pursuant to e-mail communications between the parties, the Arbitral Tribunal on September 4, 2001 by e-mail endorsed the parties' agreement to extend the September 21, 2001 deadline to October 21, 2001.

[26]
Pursuant to communications between the parties, the Arbitral Tribunal on October 22, 2001 by e-mail has noted the agreement between the parties to extend the October 21 deadline to October 28, 2001.

[27]
On October 28 and 29, 2001, [buyer] respectively [sellers] by letter filed their final observations with the Arbitral Tribunal (with enclosures). These letters established that parties were not in agreement regarding a bifurcation of the proceedings nor regarding the question how the case was further to be managed.

[28]
On December 6, 2001, the Arbitral Tribunal acknowledged receipt of these letters and indicated that a decision or further instructions might be expected in the course of January 2002.

[29]
Mid-February 2002, the secretary of the Arbitral Tribunal informed counsels to the parties in bilateral phone conversations that exceptional circumstances due to the temporary unavailability of one of the arbitrators in relation to health problems was causing delay in the decision making process. This was confirmed in writing on February 22, 2002. That letter also indicated that a decision might be given in the course of March 2002.

[30]
On April 9, 2002, the Deputy Administrator wrote to the parties that the arbitral award in all probability would be ready at the end of April and requested [sellers] to arrange for payment of an additional deposit for the fees and disbursements of the arbitrators.

[31]
On May 3, 2002, the Arbitral Tribunal informed the parties that more time was needed to come to a decision.

[32] On August 8, 2002, the Arbitral Tribunal indicated, at the request of [sellers], that a draft award had been made and was now subject to deliberation between the members of the Arbitral Tribunal.

[33]
On August 6, 2002, the Deputy Administrator of the NAI requested [sellers] to pay a second additional deposit for the fees and disbursements of the arbitrators. On August 14, 2002, the Deputy Administrator confirmed to the Arbitral Tribunal and to the parties that [sellers] had paid the second additional deposit.

[34]
On September 24, 2002, the Deputy Administrator of the NAI requested [sellers] to pay a final additional deposit for the fees and disbursements of the arbitrators.

[35]
During the proceedings, neither [sellers] nor [buyer] maintained objections as to how the proceedings had been handled nor did either party continue to participate in the proceedings under any reservation whatsoever.

2. Brief Summary of the Facts

[36]
The following sets forth the facts as they are understood by the Arbitral Tribunal.

[37]
[Sellers] are all active in the exploration of offshore gas fields in the Netherlands continental shelf. They have been granted production licenses for certain blocks. In order to spread risks, exploration and production generally take place in the form of joint venture contracts with one company being the operator responsible for operational and financial issues. Products are

being allocated between the joint venture partners in accordance with their proportionate ownership interest. However, sales are the sole responsibility of each of the companies.

[38]
[Buyer] is a major international player in the field of exploration, production and refining of crude oil and distribution of oil products and gas.

[39]
Condensate is an associated liquid product derived from the exploration of gas fields after separation from the gas stream by the producer. Condensate from the fields operated by [sellers] and subject of the dispute is referred to as «Rijn Blend».

[40]
In 1993 and 1994, [sellers] (or their predecessors) concluded twelve sales contracts with [buyer] in relation to the abovementioned Rijn Blend. There are - according to the Request for Arbitration - 13 [sellers] while there are 12 sales contracts. This is related to the fact that 1) affiliated companies (*i.e.*, the ... companies, the ... companies and the ... companies) only concluded one contract, and 2) that some contracts have been assigned from the original seller (the contracts with ... respectively with ... BV) to one of the [sellers] (C. BV respectively Y. BV). Reference is in this respect made to Exhibit 2 of the Statement of Claim.

[41]
As far as the Arbitral Tribunal understands, the condensate came from various offshore gas fields (*i.e.*, blocks P11a, P14a, P15a, P15b, P15c, P18a and P18c) operated by [sellers] in the Netherlands continental shelf. The condensate streams were brought together at the P15-D platform in the North Sea where they were commingled with one another and with crude oil produced from an offshore oil field. From the platform, the blend was transported through a single pipeline to Tank 101 of the ... Company (a joint venture of ... NV (65%) and ... BV (35%), hereafter referred to as «Q») terminal in Europoort where it was delivered «ex storage tank» to [buyer] as a condensate/crude oil mix, hereafter named the «Rijn Blend». The delivery and lifting of the Rijn Blend at Europoort took place jointly for all sellers in accordance with a pre-established nomination procedure. The Rijn Blend is subsequently refined on behalf of [buyer] at the Q. refinery and derivate products are sold by [buyer] to users.

[42]
[Buyer] alleges that at the Q. refinery the Rijn Blend is blended with other crude oils to optimise the refining process. Subsequently, the refining process results in the production of LPG, light naphtha, heavy naphtha, kerosene, light gas oil, heavy gas oil and residue. All light naphtha produced at Q. is sold to CH. ... GmbH, a joint venture between KK. ... AG and Deutsche ... AG, a subsidiary of CH. ... GmbH also has other suppliers for its light naphtha requirements.

[43]
[Sellers] were not the only sellers of Rijn Blend to [buyer]. One other seller was K. ... BV who was also the operator of the P15-D platform. After the merger of [buyer]'s parent company and K., K. ... BV was renamed «... BV» and has taken a neutral position regarding the disputes between [sellers] and [buyer].

[44]
The sale contracts of [sellers] with [buyer] were identical or almost identical. There was no detailed product description and only a few specifications for the product. All contracts provided for application of Dutch law and for NAI arbitration.

[45]
Apparently, from 1993 or 1994 on and for a long time, there had been no problems regarding the sale contracts between [sellers] and [buyer].

[46]
[Buyer] alleges that CH. ... GmbH was encountering processing problems at its plant as of Spring 1997 resulting in rapid de-activation of catalysts and corrosion (causing operational and environmental concerns) and that as of May 1997, Q. had been contacted since the light naphtha produced at Q. might have caused the problems. As of November 1997, a possible link was made with mercury levels in the Rijn Blend used at Q. [Buyer] further alleges that the link was established as of May 1998 and that solutions (both long and short term) were envisaged in cooperation with K. ... BV.

[47]
The disputes between [sellers] and [buyer] relate to deliveries as of June 1998. On June 11, 1998, [sellers] were informed by K. ... BV that [buyer] had indicated that it would not take the next lifting of the Rijn Blend because of levels of mercury in the Rijn Blend, which made it unacceptable for further processing or sales.

[48]
Because of alleged lack of storage facilities, the Rijn Blend -- on June 13, 1998 -- was loaded onto a vessel chartered for that purpose. Also, it is alleged that storing on a chartered vessel was a cheaper option than shutting down production at the gas fields. Because of the alleged absence of short-term local market opportunities, the Rijn Blend was transported to the United States where it was sold to LL. Petroleum Corp. at a price substantially lower than the price under the contract. In this respect, [sellers] allege that they suffered losses of US $1,100,000.

[49]
On June 16, 1998, [buyer] informed [sellers] that it would suspend taking delivery of the Rijn Blend until a solution for the mercury problem had been found.

[50]
Since a solution was not found regarding the mercury problem, [buyer] terminated the contracts or led the contracts to expire in accordance with the contract termination provisions or the contract provisions regarding renewal. In the intermediate period, [sellers] sold the condensate not taken by [buyer] to third parties (such as one further sale to LL. Petroleum Corp., two to M. International AG and all others to H.... BV) at an alleged loss as compared to the contract price. On top of the US $1,100,000 on the June 1998 cover sale, the Arbitral Tribunal gathers from the information provided by [sellers] that other cover sales caused losses alleged to be in excess of US $5 million resulting in an alleged overall loss of US $6,333,178.58.

3. Arguments of [sellers]

[51]
[Sellers] argue that the Rijn Blend delivered over the life span of the contracts was in accordance with the contracts since no specific quality requirements had been agreed upon. Furthermore, [sellers] contest that they should be involved in downstream problems and that [buyer] should have dealt with these problems in its contracts with a downstream customer. Also, they claim that they could not be aware of the purpose for which the Rijn Blend was used by [buyer] and, therefore, had no obligations whatsoever in meeting product requirements further downstream.

[52]
[Sellers] also contest that the Rijn Blend would have shown increased levels of mercury since the contracts were concluded or that the problems downstream might have been attributable to the Rijn Blend. Furthermore, they claim that [buyer] was or should have been aware of mercury content in condensate.

[53]
Even if the Rijn Blend were non-conforming in relation to the contractual obligations, [sellers] deny any liability because of the fact that [buyer] had been aware of the mercury problem and thus did not notify non-conformity within a short period as required by article 39 CISG. Moreover, the fact that [buyer] informed K. ... BV did not amount to knowledge on the part of [sellers] because K. ... BV in no way had authority to bind [sellers].

[54]
On the basis of these submissions, [sellers] argue that the goods were conforming and that there had been a breach of contract by [buyer] in refusing delivery and suspending its obligations under the contracts. Thus, [sellers] requested the Arbitral Tribunal to condemn [buyer] to pay damages including internal costs related to the dispute, costs of legal assistance and representation and interest.

4. Arguments of [buyer]

[55]
[Buyer] declined any liability. In its opinion, the goods were not conforming and it was, therefore, entitled to refuse delivery and suspend its obligations. [Buyer] in this respect argued that there were increased levels of mercury in the recent past and that [sellers] knew or should have known that -- since Rijn Blend is used in the refinery process -- it might cause damages downstream.

[56]
Furthermore, [buyer] argued that it had been discussing the problems with K. ... BV for several months and that [sellers] were aware or should have been aware of these discussions. Moreover, [sellers] were bound by K. ... BV's acts since -- as an operator -- K. ... BV was acting for [sellers] too.

[57]
Also, [buyer] challenged the entitlement of each [seller] to any damages because their share of participation in the exploration fields had not been established. In response, [sellers] have offered to provide adequate indemnification.

[58]
In its counterclaims, [buyer] invoked the annulment of the contracts on the basis of mistake and the dissolution of the contracts for breach of contract on the part of [sellers]. These counterclaims were amended in the Memorial of Rejoinder to that effect that damages only for breach of contract by [sellers] was claimed. Ultimately, [buyer] withdrew its amended counterclaim on October 28, 2001.

5. Position of the Arbitral Tribunal

[59]
The disputes between the parties are primarily related to the following issues: 1) the conformity of the Rijn Blend; 2) the question whether notice of non-conformity was timely and could be given to K. ... BV; 3) the question whether [buyer] could refuse taking delivery and suspend further off-taking of Rijn Blend; 4) the determination of the total amount of damages, if any; 5) the allocation of damages, if any, among [sellers]; and 6) in relation to the counterclaim: the alleged breach of contract by [sellers].

[60]
On the contrary, the parties agree on the following issues: 1) the application of the Convention on International Sale of Goods concluded in Vienna on April 11, 1980 (hereinafter referred to as «CISG») to the respective contracts; 2) the application of the Dutch statutory interest rate to damages, if any. In view of the parties' agreement regarding these two issues, the Arbitral Tribunal will proceed on the basis of the application of CISG and the Dutch statutory interest rate.

[61]
The issues in dispute referred to above, will be discussed by the Arbitral Tribunal in the order set forth above.

5.1 Issue 1: Conformity of the Rijn Blend

[62]
Article 35(1) CISG provides that the seller should deliver goods, which are of the quantity, quality and description required by the contract. All twelve contracts do not contain quality specifications but only define Rijn Blend as a «Mix of ... condensates and/or crude oil ...», «... condensates and crude oil» or «condensates» and refer to the blocks from where the Rijn Blend originate. The contracts also refer to the gravity of the Rijn Blend for price calculation purposes but parties agree that this element is of no relevance for the present purposes. Consequently, article 35(1) CISG is not applicable to the conformity issue.

[63]
Article 35(2) CISG provides in relevant parts that the goods do not conform with the contract unless they: (a) are fit for the purposes for which goods of the same description would ordinarily be used; or (b) are fit for any particular purpose expressly or impliedly made known to the seller at the time of the conclusion of the contract, except where the circumstances show that the buyer did not rely, or that it was unreasonable for him to rely, on the seller's skill and judgement.

[64]
Authorities and case law regarding article 35(2) CISG are divided on the question whether CISG deals also with the question of the burden of proof. One opinion stands for the proposition that, under CISG, the buyer has the burden of proof of lack of conformity (Schlechtriem, Art. 4, No. 44, Honsell, 1995, art. 36, No. 15; Handelsgericht Zürich, September 9, 1993, Unilex database [*see also* Pace Database], referring to Schweizerische Zeitschrift für internationals und europäisches Recht, 1995, No. 2; Handelsgericht Zürich, November 30, 1998, Unilex database [*see also* Pace Database], Schweizerische Zeitschrift für internationals und europäisches Recht, 1999, 185; Tribunale di Vigevano, July 12, 2000, Unilex database [*see also* English translation available at Pace Database], Diritto del commercio internazionale, 2001). Another theory advocates that the question of burden of proof is not dealt with in CISG and that the otherwise applicable law governs that question (ICC arbitral award, Case 6653 (1993), Unilex database [*see also* English translation available at Pace Database], referring to Clunet 1993, 1040).

[65]
This debate is irrelevant in the present case because the parties are in agreement that CISG applies by virtue of article 4 of the Rome 1980 Convention on the Law Applicable to Contractual Obligations. Under article 4, the law of the sellers is applicable. Thus, Dutch law would be applicable if the second theory mentioned above would apply. Under Dutch law, a buyer also has the burden of proof of non-conformity if used as a defence against claims by a seller.

[66]
Consequently, both under CISG and Dutch law, [buyer] has the burden of proof of the fact that the goods were unfit for their ordinary use or for a particular purpose (similarly Tribunale di Appello di Lugano, January 15, 1998, Unilex database [*see also* English translation available at Pace Database], unpublished in hard copy).

[67]
As to Article 35(2)(b) CISG, the Arbitral Tribunal notes that the particular purpose of the goods must have been made known to the seller at the time of the conclusion of the contract. The question then arises whether [buyer], at that time (i.e., 1993 and 1994) expressly or impliedly indicated to the respective [sellers] the use it intended to make of the Rijn Blend. The Arbitral Tribunal is of the opinion that it did not. First, the sale contracts do not contain a product quality specification. Absent such a specification, [buyer] did not indicate expressly the particular purpose it had in mind for the Rijn Blend. Secondly, an implied indication as to a particular purpose made in 1993 and 1994 also has not been proven. There are no elements of evidence that the parties implicitly agreed upon particular requirements for the Rijn Blend. Neither is

there evidence that such an implied indication -- in accordance with Article 8 CISG -- is to be inferred from statements, intentions or conduct of either party. Furthermore, the nature of the product leads more to the opposite conclusion. The Arbitral Tribunal understands that blended condensate such as Rijn Blend is a commodity that can be used in different capacities in refining processes and thus that various refiners may use it in varying degrees and for different purposes. Also, a buyer not necessarily should use all condensate but may resell all or parts of it. In this respect, the Tribunal also has considered that events occurring after 1993 and 1994 are not relevant to determine conformity issues because of the marking point in Article 35(2)(b) at the time of contract formation. In other words, if quality specifications had become important for [buyer] during the lifetime of the contract, the contracts might have been amended accordingly. Finally, although [buyer] is part of the ... group, which through the joint venture with ... at Q. also refines at Europoort where the Rijn Blend was to be delivered, the Arbitral Tribunal understands that [buyer]'s activities also include trading. Thus, it should not necessarily have been so that [sellers] under the circumstances had to know that the Rijn Blend was to be refined at Q. and that the condensate was exclusively used by [buyer] to produce light naphtha destined to one single downstream customer. The Arbitral Tribunal is further of the opinion that this conclusion is not changed by the fact that [buyer] did buy all output from the blocks specified in the contracts in which [sellers] had interests. Consequently, the Arbitral Tribunal rules that, absent contract quality specifications, Article 35(2)(b) CISG is not the proper basis to assess non-conformity issues in international sales of commodities such as Rijn Blend.

[68]
The Arbitral Tribunal, thus, finds that the dispute between the parties is to be analysed under Article 35(2)(a) CISG which requires that the goods are fit for the purposes for which goods of the same description would ordinarily be used. In this respect, three interpretations exist. According to a first line of thought, Article 35(2)(a) requires that the seller delivers goods which are of a *merchantable quality*. This interpretation goes back to the drafting history of CISG. During the negotiations of CISG, the question arose how the provision of the draft on conformity of goods, absent contract specification or particular purpose, should be interpreted. At that time, it became clear that the English common law countries favoured merchantable quality whereas the civil law continental European rule was to the effect that average quality is required. In order to clarify the draft, the Canadian delegation proposed to endorse the civil law rule by also including an average quality rule. However, during the negotiations, the Canadian amendment was withdrawn. This background has been mentioned in the German *New Zealand Mussels* case but was considered not to be relevant there because the mussels were both merchantable and of average quality (Oberlandesgericht Frankfurt, April 20, 1994, Unilex database [*see also* Pace Database], referring to RIW 1994, 593, confirmed by Bundesgerichtshof, March 8, 1995, Unilex database [*see also* English translation available at Pace Database], referring to NJW 1995, 2099). No case law could be found which inferred from the *travaux préparatoires* that the continental rule was not to be adopted and that merchantable quality is sufficient.

[69]
The second view is that the *average quality* rule is to be adopted in relation to CISG cases (for

one such instance, see without further references, Landesgericht Berlin, September 15, 1994, Unilex database [*see also* English translation available at Pace Database], unpublished in hard copy).

[70]
Scholarly writings have mentioned the problem (see Bianca, C.M., Commentary on the international sales law, Bianca, C.M. and Bonell, J.M. (ed.), Milan, Giuffrè, 1987, Art. 35, No. 3.1) but later publications, even among civil law scholars, are divided between merchantable and average quality (for references, see Schwenzer, I., in Schlechtriem, P., Commentary on the UN Convention on the International Sale of Goods (CISG), Oxford, Clarendon Press, 1998, Art. 35, fn. 46 and Schwenzer, I., in Schlechtriem, P., Kommentar zum Einheitlichen UN-Kaufrecht, third edition, Munich, Beck, 2000, Art. 35, No. 15 and fn. 46) with a majority of Germanic writers endorsing the average quality rule based upon similar rules in the German, Austrian and Swiss civil codes. Some other authors have taken positions similar to the majority view but with some qualifications based on the concrete circumstances of the case such as a buyer ordering goods from a specialized manufacturer (entitled to above-average quality) or a buyer who under specific circumstances could not expect average quality (entitled to below-average but still satisfactory quality) (see Heuzé, V., La vente internationale de marchandises, Paris, GLN Joly, 1992, 219; Achilles, W.A., Kommentar zum UN-Kaufrechtsübereinkommen (CISG), Neuwied, Luchterhand, 2000, Art. 35, No. 6). Finally, some French authors have specifically stated that the average quality rule of the French Civil Code is not applicable to CISG cases (Heuzé, V., o.c., 219, Audit, B., La vente internationale de marchandises, Paris, LGDJ, 1990, 96).

[71]
Finally, a third theory rejects both opinions mentioned above and states that neither merchantability nor average quality fit within the CISG system. This theory rather suggests a reasonable quality (Bernstein, H., and Lookofsky, J., Understanding the CISG in Europe, The Hague, Kluwer Law International, 1997, 59-60). One case has endorsed this theory in holding that the buyer's reasonable expectations are to be taken into account (Arbitral Award, June 5, 1998, Arbitration Institute, Stockholm Chamber of Commerce, Unilex database [*see also* English text available at Pace Database] , unpublished in hard copy).

[72]
Contrary to Article 35(2)(b) CISG, Article 35(2)(a) does not require that quality requirements are determined at the time of the conclusion of the contract. Thus, factual elements occurring after the conclusion of the contract may be taken into account to determine quality standards.

[73]
As to evidence, parties are in disagreement whether the increased mercury levels found at the CH. ... GmbH plant in Germany can be traced back to increased mercury levels of the Rijn Blend delivered at Q ...

[74]
In this respect, the Arbitral Tribunal notes that already on April 21, 1998, it became clear that the problems encountered at CH. ... GmbH were traced back to Rijn Blend and that minutes of a meeting at which a representative of K. ... BV participated (Exhibit 4.1 Statement of Claim)

contain express and unqualified statements to that effect whereas on the file there is no evidence that on the part of K. ... BV reservations have been made *in tempore non suspecto* against these statements.

[75]
Furthermore, it is surprising that when [buyer] indicated on June 10, 1998, that it was unwilling to off-take further lifting of Rijn Blend (Exhibit 4.1 Statement of Claim), K. ... BV invoked legal arguments why such a refusal would violate the contracts but did not dispute the accuracy of the mercury problems and the fact that [buyer] attributed these problems to the Rijn Blend.

[76]
Also, the Tribunal finds that the contents of the July 6, 1998 K. ... BV letter (Exhibit 4.6 Statement of Claim) is contradicting [sellers]' argument that the cause of the mercury problem remained unproven. That letter makes clear that it was at least K. ... BV's position that the mercury level was attributable to the Rijn Blend sellers since it envisaged giving [buyer] a price reduction. The letter states explicitly and without a reservation:

«*With reference to the crude/condensate sales agreement we do agree that as a result of the recent quality (mercury) change of the product received at the receivers point* [...] *has the right to negotiate an adjusted price for such an offset quality and K. is receptive into agreeing to such a revised price.*»

[77]
On the basis of these arguments, the Arbitral Tribunal finds that [buyer] has sufficiently proven that there is a substantial likelihood that mercury problems at CH. ... were caused by increasing levels of mercury coming from Rijn Blend.

[78]
The Arbitral Tribunal has not read in the file relevant arguments advanced by [sellers], which might indicate that there were no increased levels of mercury in the Rijn Blend. [Sellers] have only given general hypothetical alternative causes for the mercury problems at CH. ... but not substantiated these alternative causes by concrete evidence indicating that Rijn Blend could not have caused these problems.

[79]
In this respect, the Arbitral Tribunal gives much more weight to the position of K. ... BV in the process of identifying the causes of the increased levels of mercury than to the contradictory expert reports put forward by the parties.

[80]
The Arbitral Tribunal therefore proceeds on the basis that the Rijn Blend contained increased levels of mercury and, thus, must answer the question whether Rijn Blend with increased levels of mercury still meets the standard of Article 35(2)(a) CISG requiring products to fit ordinary purposes of goods of the same description. The Arbitral Tribunal is thus facing the question mentioned above whether merchantable, average or reasonable quality is required.

[81]
As a starting point of the analysis, it should be noted that condensate is a commodity with

multiple purposes. It can be used in the refining process but it may also be used by chemical and other companies (see... Report, [Sellers]' Exhibit No. 3, p. 1; ... report, [Buyer]'s Exhibit No. 16). Thus, condensate may be characterized as a multi-purpose commodity.

[82]
The question then arises whether Rijn Blend is also a multi-purpose commodity. The evidence of all expert reports seems to be in agreement that Rijn Blend is a «full range condensate» (as opposed to a «natural gasoline condensate») (... Report, [Sellers]' Exhibit D-1, p. 3/13-4/13; ... Report, [Sellers]' Exhibit D-2, p. 1; ...Report, [Buyer]'s Exhibit No. 17, p. 1-2).

[83]
The experts are also in agreement that Rijn Blend may be both a refinery feedstock and a feedstock for the petrochemical industry (... Report, [seller]' Exhibit No. 3, p. 1; ... Report, [buyer]'s Exhibit No. 16, 4 and 9).

[84]
[Buyer] has alleged that Rijn Blend (or similar blended condensates) are only processed in small volumes by petrochemical companies and that the large volumes are processed by refineries (... Report, [buyer]'s Exhibit No. 16, p. 9). Furthermore, [buyer]'s evidence has stated that Rijn Blend for all practical purposes was to be used for refining (... Report, [buyer]'s Exhibit No. 17, 8-9).

[85]
[Buyer] has not adduced evidence to demonstrate that Rijn Blend was also used or could have been used in the petrochemical industry. Furthermore, [sellers] did not contribute elements to indicate that Rijn Blend was used for purposes other than refining.

[86]
On the basis of the foregoing, the Arbitral Tribunal characterizes Rijn Blend as a single purpose commodity for the refining industry.

[87]
The Arbitral Tribunal now proceeds with the application to Rijn Blend of the three quality standards under Article 35(2)(a) CISG.

[88]
As to the standard of merchantability, it should be noted that the primarily Germanic theory of average quality is based on the assumption that in the English common law merchantability implies that goods are conforming if there is a substitute market. It would be the expression of the *caveat emptor*-rule under which buyers assume the risk of quality problems if they fail to specify quality requirements in their contracts or inspect goods before concluding the contract. This rule was, however, changed in 1910 in the *Bristol Tramways Carriage Co. Ltd v. Fiat Motors Ltd.* case (1910 2 KB 831) where the test was developed whether a reasonable buyer would have accepted the goods if he had fully examined the goods. As to commodities, the English common law developed the rule that goods conform if a reasonable buyer would have concluded the contract if he had known the quality of the goods without bargaining for a price reduction (Henry Kendall & Sons v. William Lillico & Sons Ltd, [1969] 2 AC 31). For a discussion

of the English common law, see Bridge, M., The sale of goods, Oxford, Clarendon Press, 1997, 290-316.

[89]
Thus, a merchantability test under CISG based on English common law, if any, would raise the question whether a reasonable buyer would have concluded contracts for Rijn Blend at similar prices if such a buyer had been aware of the mercury concentrations. In this respect, the substitute cover sales made to LL. Petroleum Corp., M. International AG and H. ...BV are relevant. [Sellers] have argued that these cover sales have been contracted on an arm's length basis. From [Sellers]' Exhibit 5a to the Statement of Claim, it appears that the cover sale to LL. Petroleum was made at a 31% discount (US $9 as compared to the price of US $13.04 under the contracts). Although the first sale might have been a distress sale, the subsequent 15 sales were made at discount within a range of 14% (October 1998) to 44% (February 1999). It is conjectural to what extent these discounts may be attributed to the mercury levels of the Rijn Blend but, in the opinion of the Tribunal, [sellers] sufficiently have established that these cover sales were made at discounts and on an arm's length basis without that evidence being rebutted by [buyer]. For that reason, the Arbitral Tribunal is ready to accept that [sellers] have met their burden of proof that these ranges indicate that there was no market for Rijn Blend with increased mercury levels at prices comparable to the sales contracts when the increased levels were disclosed to prospective alternate buyers.

[90]
From this evidence, the Arbitral Tribunal accepts that the goods were not merchantable as this concept is generally used in common law countries having a law based on English common law. Apparently, other buyers in the market for Rijn Blend were -- at times comparable to the June 1998 contemplated lifting -- unwilling to pay the price [sellers] had agreed with [buyer].

[91]
Consequently, if a merchantability test (as understood in the common law) were to be used for interpreting article 35(2)(a) CISG, it would lead to the conclusion that the delivery of Rijn Blend with increased mercury levels did not conform to the sales contracts.

[92]
As to average quality, the evidence presented to the Arbitral Tribunal by both parties indicates and -- sometimes -- emphasizes that quality of condensates such as Rijn Blend may differ from one region to another due to geological or other reasons. The Arbitral Tribunal will thus limit its analysis to the relevant geographical market. As suggested by the evidence presented and the expectations of the parties, the geographical market may be limited to the North Sea market.

[93]
As has been indicated before, only the product market for so-called «full range» condensates will be taken into account. In determining average quality, the relevant product is to be looked upon. The presence of mercury in other products such as gas, may be relevant for purposes such as determining the awareness in the industry of mercury content but not for determining the quality of a different product such as condensate.

[94]
From the ... Report (p. 16 [Sellers]' Exhibit No. 3 to the Statement of Claim), it appears that ... and ... in The Netherlands do not systematically check on mercury in condensate streams. However, H. does and has measured averages of up to 270 ppb with a maximum of 1,000 ppb (parts per billion). In this respect, the ... Report ([Buyer]'s Exhibit No. 17, p. 5) mentions that H. is using condensate not as refinery feed but as direct feedstock to its petrochemical operations.

[95]
From the Supplemental ... Report (p. 12, [Sellers]' Exhibit 2 to the Memorial of Reply), it appears that in The Netherlands ppb values between < 1 and 1167 have been found in condensates. The ... Report ([Buyer]'s Exhibit No. 17, p. 4) notes in this respect that the ... Report ignores the UK's Southern Gas Basin low mercury levels although -- in ... view -- they have the same geology as the Dutch fields. ... has replied to this critical observation that no quantitative elements are available (... Report, [Sellers]' Exhibit D 2, p. 2).

[96]
From Exhibit 4 to [Buyer]'s Statement of Defence and Counterclaim, it may be inferred that a Q. report did find 0.3 to 0.4 ppb in Dutch condensate on January 22, 1995 and February 7, 1995. From Exhibit 7, it appears that from August 1997 thru November 1997, the following measurements were taken from Tank 101 regarding Dutch condensate/Rijncrude: 93 ppb, 44 ppb, 32 ppb, 16 ppb, 164 ppb, 173 ppb, 181 ppb, 215.5 ppb, 230 ppb and 217.5 ppb. From Exhibit 10, it appears that Q. and K. samples confirmed high mercury levels in pure Rijn condensate and in K. line crude imports. The Arbitral Tribunal in this respect notes that some of these measurements may be questioned as to the definition of the condensate and their comparison with Tank 101 contents.

[97]
In order to prove that the Rijn Blend in June 1998 did not conform with the contracts, [buyer] would have to prove: 1) the mercury levels in or around June 1998, 2) the above average levels of those levels, and/or an unacceptable increase of those levels over the lifetime of the contract.

[98]
The mere fact that the Arbitral Tribunal is prepared to accept (see supra Nos. 74-80) that the problems at CH. ... were caused by increased levels of mercury attributable to Rijn Blend sold by [sellers], does not imply that these levels by logical necessity or on the basis of other considerations are to be held above average or unacceptably high and consequently turning Rijn Blend into a condensate of below average quality. The mere fact that K. ... BV investigated the matter and also looked for solutions, does not imply that it accepted that the goods did not conform. K. ...'s attitude may well have been inspired by commercial reasons to keep an important long-term customer.

[99]
[Buyer], thus, under the average quality standard, has the burden of proof to establish that the goods in June 1998 were likely to be below average quality.

[100]
In the opinion of the Arbitral Tribunal, [buyer] has failed to meet that burden of proof. From the evidence, it is unclear whether there is a common understanding in the refining industry what average quality for blended condensates (such as Rijn Blend) should have been and what levels of mercury are tolerable. Also, it has not been proven what margins from an average standard, if any, are permissible.

[101]
The Arbitral Tribunal's conclusion above is not altered by the fact that [sellers] have attempted to prove that in the industry, at the time the Contracts were concluded in 1993/1994, there was a general awareness of mercury levels in condensates and their consequences in refining processes. Even if that had been proven, it would not change the Tribunal's conclusion because still no average quality standards and the acceptable levels of mercury therein have been established.

[102]
Not having met its burden of proof, [buyer], under an average quality standard, were to be held liable for not accepting delivery of the Rijn Blend in June 1998, provided the Arbitral Tribunal would accept such an average quality standard under Article 35(2)(a) CISG.

[103]
The Arbitral Tribunal is thus faced with a choice between merchantable quality and average quality since both tests lead to different conclusions. However, the Tribunal is of the opinion that neither test is to be applied in CISG cases.

[104]
First, the interpretation of Article 35(2)(a) CISG is to be guided by Article 7(1) CISG which suggests that the international character of the Convention and the need to promote uniformity in its application and the observance of good faith in international trade are to be taken into account in the interpretation process.

[105]
The need to ensure uniformity would indicate that, since there are no clear-cut cases or uniform scholarly opinions, neither standard at first sight should prevail.

[106]
Thus, Article 7(2) CISG may be invoked. Article 7(2) provides that matters governed by CISG but not expressly settled in it, are to be solved in conformity with the general principles on which CISG is based or, in the absence of such principles, in conformity with the law applicable by virtue of the rules of private international law.

[107]
This provision imposes first an intro-interpretation with respect to interpretation issues or gaps (*i.e.*, solutions are first to be sought within the CISG system itself). Absent general principles on which CISG is based, recourse may be had to domestic law indicated by virtue of principles of private international law.

[108]
This provision would seem to exclude the average quality rule. Although it is embodied in the

law of both Germanic and Romanistic legal systems, Heuzé -- as referred to above -- has rightly indicated that national notions regarding quality of goods are not controlling in CISG cases. For that reason, the average quality standard cannot be accepted. It is a theory, which imports a domestic notion, which is not sufficiently universal into the CISG system in violation of Article 7(2) CISG. Furthermore, recent codifications in civil law countries such as in The Netherlands have abolished the average quality rule of Article 1428 old Civil Code in favour of a reliance standard (see Article 7:17 Dutch Civil Code).

[109]
The same argument against domestic conformity notions, of course, must be used in relation to the merchantability standard of the English common law. Thus, English common law based jurisdictions such as Canada, Australia, New Zealand or Singapore cannot use their merchantability criteria *ne varietur* in CISG cases.

[110]
In solving this interpretation issue, attention is also to be paid to Articles 31 and 32 of the Vienna Convention on the Law of Treaties dated May 23, 1969.

[111]
Article 32 of the 1969 Vienna Treaty permits to resort to the *travaux préparatoires* of treaties to explain ambiguous or unclear treaty provisions. Article 35(2)(a) CISG may thus be interpreted on the basis of the preparatory work during the negotiations leading to CISG. In this respect, the Canadian proposal is to be recalled which was worded as follows (text at [Pace Database]):

«*For the purposes of paragraph (2)(a), the goods are reasonably fit for the purposes for which the goods of the same description would ordinarily be used if,*

(a) they are of such quality and in such condition as it is reasonable to expect having regard to any description applied to them, the price and all other relevant circumstances;

and without limiting the generality of clause (a),

(b) if the goods, (i) are such as pass without objection in the trade under the contract description, (ii) in the case of fungible goods, are of fair average quality within the description, ...»

[112]
There being no consensus on the Canadian proposal, it was withdrawn. The records of the 15th meeting of the Diplomatic Conference under No. 45 indicate in this respect that the proposal was withdrawn after consultation with several other delegations from common law countries (text available at Pace Database].

[113]
Two arguments may be advanced in relation to the *travaux préparatoires*. On the one hand, one may argue that the fact that the proposal was not adopted indicates that CISG chose for the standard of merchantability.

[114]
The counterargument would be that the non-adoption and withdrawal of the proposal establishes non-consensus regarding the issue and that the drafters of CISG intentionally created an ambiguity or gap without taking a position on it.

[115]
The latter proposition seems to be more likely. First, the Canadian proposal cannot be interpreted as defending the traditional English law requirement of merchantability but rather attempted to clarify it. In this respect, the text of the Canadian proposed amendment borrowed heavily from the text of § 2-314 of the U.S. Uniform Commercial Code which is not a strict merchantability criterion but more an open-textured provision, referring also to average quality (see infra). One may infer from the text of the Canadian proposal that the strict merchantability criterion was not even proposed and its withdrawal, consequently, cannot endorse the theory of strict merchantability.

[116]
On the other hand, the Canadian proposal and its withdrawal can also not be invoked for the proposition that CISG adopted a criterion of average quality. At least, it did not exclude it. Thus, the drafting history of CISG does not permit to draw a clear conclusion regarding the intentions of the drafters and, consequently, it does not help to explain the ambiguity of Article 35(2)(a) CISG (Ziegel, J., Report to the Uniform Law Conference of Canada on Convention on Contracts for the International Sale of Goods, Article 35 under (3), available at Pace Database).

[117]
On the basis of the arguments above, the Tribunal holds that neither the merchantability test nor the average quality test are to be used in CISG cases and that the reasonable quality standard referred to above (see No. 71) is to be preferred.

[118]
The choice in favour of a test of reasonable quality is supported by the authors and the case cited above in No. 71 as well as by those scholarly writings that have rejected the average quality test. It is compatible with the *travaux préparatoires* since the Canadian amendment does not exclude an interpretation in favour of reasonable quality since it provided that under article 35(2)(a) CISG goods are fit for their ordinary use if it is reasonable to expect a certain quality having regard to price and all other relevant circumstances. Also, any such interpretation complies with article 7(1) CISG imposing to take into account the international character of CISG and its reluctance to rely immediately on notions based on domestic law. Furthermore, the interpretation preferred by the Arbitral Tribunal is consistent with article 7(2) CISG, which primarily refers to the general principles of CISG as possible gap fillers. In this respect, it may be noted that CISG often uses open-textured provisions referring to reasonableness (*e.g.*, articles 8, 18, 25, 33, 34, 37, 38, 39, 43, 44, 46, 48, 49, 65, 72, 75, 77, 79, 86, 87 and 88). Finally, even if one were to rely on domestic law by virtue of article 7(2) CISG, Dutch law would be applicable and would also impose a standard of reasonable quality.

[119]
The question then arises whether the Rijn Blend delivered in 1998 did meet the reasonable

quality requirement. The Arbitral Tribunal is of the opinion that it did not for at least two reasons: price and the long-term nature of the sales contracts.

[120]
As to price, it has been sufficiently proven (see No. 89) that the price as determined by the price formula agreed upon by the parties in all likelihood -- even taking into account transportation costs -- could not been obtained for cover transactions when the mercury levels were disclosed to alternate prospective buyers. This is an objective element to be taken into account when determining the quality of the Rijn Blend. Apparently, Rijn Blend with increased mercury levels has a significant lower value than Rijn Blend without increased mercury levels and a discount is to be paid for the buyer's costs in removing the mercury or a buyer's alternate use. Consequently, the Arbitral Tribunal finds that [sellers] could well insist upon the performance of the sales contracts if -- in relation to the contract price -- they had been willing to bear the costs of removing the mercury from the Rijn Blend. Alternatively, the parties could have agreed upon a price reduction to reflect the decreased value of the Rijn Blend. Both options apparently have been discussed during negotiations between the parties but no solution could be found. Therefore, it is the opinion of the Arbitral Tribunal that [buyer], based on the price to be paid under the contracts, could insist upon removal of the mercury or price reduction and alternatively could refuse delivery of the Rijn Blend.

[121]
The long-term nature of the sales relationships between the parties corroborates the findings of the Arbitral Tribunal set forth in the preceding paragraph. Apparently, there have been no quality problems related to the levels of mercury in the Rijn Blend in the initial years of the Contracts as of 1993/1994. At the least, [buyer] has sufficiently proven or made it sufficiently probable that CH. ... was its downstream customer over the lifetime of the contracts or the least as of 1995 (Exhibit 10 to the Statement of Defence and Counterclaim, p. 1). Over that sufficiently long period, a pattern had developed under which -- in the opinion of the Arbitral Tribunal -- [buyer] could expect that the Rijn Blend met the quality requirements it was or had become used to over the years. In this respect, the Arbitral Tribunal finds that the [buyer] has sufficiently proven or at least sufficiently has established the probability that the Rijn Blend delivered to it had sudden increased mercury levels. The Arbitral Tribunal has not read in the evidence submitted by [sellers] that there were increased mercury levels well before 1998. Consequently, the Tribunal holds that [buyer] was entitled under the contracts to a constant quality level of the Rijn Blend corresponding to the quality levels that had been obtained during the abovementioned initial period of the Contracts and on which [buyer] and its customers could reasonably rely. This conclusion is not altered by the fact, as emphasized by [sellers] during the June 2001 hearing, that [buyer] never measured the mercury content upon or before conclusion of the Contracts. This fact, in the opinion of the Arbitral Tribunal, is of no importance. On the basis of the arguments above, it is clear that the results of these measurements at that time would not have indicated the abovementioned increase of mercury levels.

[122]
Since [buyer] was claiming relief (*i.e.*, suspension of performance) only as of the June 1998 deliveries when as of April 1998 it had in its mind become established that there were in-

creased levels of mercury in the Rijn Blend (and no other causes for the increase were present), it could invoke such relief as of that date. In this respect, it has not been established that [buyer] had waived its rights by taking delivery as of 1996 or as of April 1998. The Tribunal, on the contrary, is of the opinion that [buyer] acted in a constructive manner in trying to solve the problem (albeit only with K. ... BV) rather than to claim relief for past damages.

[123]
On the basis of the contract price and the nature of the relationship between the parties, the Tribunal finds that the risks associated with changing compositions of the Rijn Blend thus laid with [sellers] who should have monitored that composition or should have agreed to removal of the mercury or to price reduction. Since it has been established that the increased levels of mercury were to be sought before the point of delivery, the risks of any such increased levels are to be allocated to the [sellers] who had control only over its possible causes and were thus in the better position to detect the increased levels and their causes and to remedy any such quality problem. Although [buyer] could also have taken precautionary measures to detect changes in the composition of the Rijn Blend, that would not have solved the liability issue (including [buyer]'s right to suspend performance) and the question where the loss had to fall. Under the circumstances, the Tribunal finds that the sellers rather than the buyer had the obligation to remove the mercury in order to be able to deliver the Rijn Blend at a quality level the buyer reasonably could expect in view of the price it was bound to pay and the quality levels it had been used to.

[124]
Consequently, the Arbitral Tribunal holds that [sellers] did not comply with their obligations to deliver Rijn Blend conforming to the contract under article 35(2)(a) CISG as of and including the June 1998 lifting.

5.2 Issue 2: Timely Notice of Non-Conformity

[125]
The Arbitral Tribunal having held that the delivery of Rijn Blend did not comply with the obligation to deliver in accordance with the contracts, now has to address the issue whether [buyer] gave a timely notice of non-conformity as required by article 39(1) CISG.

[126]
[Buyer] knew as of 1997 ([buyer]’s letters dated September 22, 1998) that there were mercury related problems at CH. ... in Germany. However, the possible link with the Rijn Blend was not established immediately and when that happened it took some time before the evidence was gathered that the mercury problems might be related to the Rijn Blend contracts. Furthermore, negotiations have been held between [buyer] and K. ... BV in order to remedy the problems that had arisen.

[127]
On the basis of these elements, [sellers] are invoking that [buyer] did not give timely notice of the non-conformity of the Rijn Blend and, thus, has forfeited its rights to contractual remedies.

[128]
However, [buyer] did comply with the contracts until June 1998. Only when it was clear that the Rijn Blend contracts might be responsible for the increased levels of mercury, did [buyer] indicate that it would refuse further deliveries. Up to that point, [buyer] did not invoke lack of conformity and breach of contract on the part of [sellers].

[129]
The question is thus whether [buyer] did breach the contract when it indicated that it would refuse further deliveries and when it actually did so. By virtue of Article 73(1) CISG incorporating a principle of severability of remedies regarding instalment contracts as the present Rijn Blend sales contracts, Article 39(1) CISG is not applicable to the June 1998 lifting because the latter article assumes that delivery has been made. In the present case, no delivery had yet been made and [buyer] merely indicated that it would refuse further deliveries.

[130]
Consequently, the issue whether notice could be given to K. ... BV does not arise.

[131]
In relation to issue 2, the Arbitral Tribunal holds that there was no obligation to give a notice as required by article 39(1) CISG and that the capacity of K. ... BV in this respect does not arise.

5.3 Issue 3: Could [buyer] refuse and/or suspend delivery for further deliveries?

[132]
In order to answer the question whether there was a breach of contract on the part of [buyer] in refusing to take delivery or suspending deliveries, its defence that the goods were non-conforming is to be taken into account as a preliminary issue. The Tribunal having held that the goods did not conform with the contract, [buyer] under the circumstances was entitled to refuse and/or suspend further deliveries (article 71 CISG) and did not breach its obligation to take delivery as required by the contract since no evidence was presented by [sellers] that the reason for refusing and/or suspending further deliveries at any time had ceased to exist. This applies not only to the June 1998 delivery but also to any other later deliveries under the contracts up to the termination or non-renewal of the contracts. Thus, the Tribunal holds that [buyer] was entitled to refuse and/or suspend further deliveries under the contracts.

[133]
Then, the question arises whether [buyer] gave immediate notice of its decision to refuse delivery and/or to suspend further off-take of deliveries to [sellers] as required by article 71(3) CISG.

[134]
It must be noted from the outset that the contracts were instalment contracts as envisaged by article 73 CISG. That provision holds that instalment contracts are deemed severable from the perspective of remedies in case of breach of contract. Thus, various deliveries under one single contract are to be treated as separate deliveries unless they are interdependent (article 73(3) CISG).

[135]
In the case of commodities to be delivered in several instalments as in the case at hand, there is in principle no reason to consider these as interdependent. Consequently, a lack of conformity with regard to one delivery does not amount to non-conformity for further deliveries unless the buyer has good grounds to conclude that further deliveries will also be non-conforming (article 73(2) CISG). On the one hand, quality levels may differ from one delivery to another so that some future deliveries might have been acceptable to [buyer]. On the other hand, the Tribunal is of the opinion that [buyer] has sufficiently proven that there was a substantial likelihood that quality shortages might occur again in future deliveries and, consequently, that there were good grounds that future deliveries may be non-conforming because the Rijn Blend under the contracts were all to come from fields identified under the contracts which in sufficient probability had increased mercury levels.

[136]
In this respect, the Tribunal interprets article 71 CISG in combination with article 73(2) CISG. Thus, [buyer]'s right to suspend performance of its obligation to take delivery of the Rijn Blend extended to deliveries to take place after June 1998. Since article 73(2) CISG requires notification within a reasonable time and it has been accepted by both [sellers] and [buyer] that [sellers] were informed in June 1998 of [buyer]'s decision to suspend performance also for deliveries to take place after June 1998, the Tribunal holds that [buyer] notified [sellers] within a reasonable time as to these further deliveries. Consequently, [buyer] complied with its notice obligation in relation to these deliveries. Since [sellers] did not rectify possible breaches regarding these further deliveries nor did they provide other adequate assurances of performance as required by article 71(3) CISG, the Arbitral Tribunal has come to the conclusion that there was no breach by [buyer] of its obligation to take delivery of these instalments and that [sellers] cannot claim damages in relation thereto.

[137]
Thus, the issue arises whether [buyer] gave immediate notice to [sellers] regarding the June 1998 delivery as required by article 71(3) CISG when they did so on June 11, 1998 by fax to K. ... BV (accepted to have been served on all [sellers], Statement of Claim, p. 8, footnote 16). Since the problems with the increased mercury levels in the Rijn Blend were known well before that time, the Tribunal holds that the June 11, 1998 notification clearly was too late in order to enable [sellers] to take whatever action they deemed fit to protect their positions in relation to the June 1998 lifting to occur some days later.

[138]
Consequently, the question arises whether the notification to K. ... BV and the subsequent discussions and negotiations with K. ... BV amounted to a notification to [sellers]. This may be so under any agency theory if it were established that K. ... BV acted in a capacity of express, implied or apparent agent of [sellers] regarding the increased mercury level problem and its possible solutions.

[139]
Sellers have presented no evidence as to an express authorization to K. ... BV as to commercial

aspects of the Rijn Blend Sale Contracts including notices with regard to non-conformity and suspension of performance.

[140]
[Sellers] have in this respect invoked a July 31, 1995 Representation Agreement concluded between some (but not all) of them giving express authority to Y. BV (and not to K. ... BV) regarding some commercial matters (Exhibit 2 Statement of Claim). The Arbitral Tribunal interprets Article 3 of this Representation Agreement regarding the scope of the representation that it only relates to nominations, price determination and price adjustments and not to other commercial matters such as the ones at hand. Thus, the Representation Agreement in its opinion is not relevant regarding K.'s capacity as an implied or apparent agent of [sellers] because it does not extend to these other commercial matters.

[141]
As of November 27, 1997 (Statement of Defence and Counterclaim, p. 5), K. ... BV was implicated by [buyer] in the process of identifying the source of the increased mercury levels. When some time in April 1998, it became clear to [buyer] and K. ... BV that the Rijn Blend was quite likely to be responsible for the increased levels, [buyer]'s all over strategy changed some time in May 1998 and it indicated to K. in London (also implicated in the process) that it insisted also on a short time solution (Exhibit 11 to [Buyer]'s Statement of Defence and Counterclaim). However, prior to the anticipated mid June 1998 off take, no such solution had been found causing damages to [sellers].

[142]
From the evidence on the file, the Arbitral Tribunal did not find undisputed facts sufficiently establishing that [sellers] prior to June 11, 1998 were aware or informed about the mercury problem or otherwise directly implicated in the process aimed at finding solutions to that problem. Consequently, [sellers] cannot be deemed to have given K. ... BV an implied authorization to deal with the mercury related problems.

[143]
The question then arises whether [sellers] by conduct or otherwise have reasonably led [buyer] to believe that K. ... BV acted as their apparent agent in relation to commercial aspects of the mercury problem. On the basis of the evidence submitted in relation to the mercury problem, the Arbitral Tribunal cannot conclude that [sellers] did. Nowhere in the contacts between [buyer] and K. ... BV is there an indication that officers or employees of [sellers] before June 11, 1998 were aware or involved of the mercury problems. In this respect, the fact that apparently some tests were conducted at the relevant fields by or on behalf of K. ... BV does not in itself prove that [sellers] were aware of the mercury related problems. Finally, the fact that after June 11, 1998, K. ... BV acted on behalf of all sellers does not prove that it was their agent prior to June 11, 1998.

[144]
The Arbitral Tribunal also looked in this regard to the so-called «TOD incident» of 1997 where some additives used at [sellers]' tanks at ___ Q. spilled over into the Rijn Blend. The Tribunal noted also in this respect that the evidence presented does not indicate that [sellers] were involved in the handling of this incident or that they were involved in the settlement of that

incident. Since K. ... BV apparently was responsible for the incident and that the settlement avoided consequences for [sellers]' deliveries, [sellers] may not have been informed about the incident. K. ... BV in its capacity of operator under the Crude Oil Terminalling Agreement may well have considered that it was its liability only that was involved and that the incident was not disclosed to [sellers] in view of the settlement of the issue.

[145]
The question of K. ... BV's capacity, thus, boils down to the question whether [buyer] could rely upon the fact that when the operational problems regarding the increased levels of mercury could not be solved when the source of these levels became known, it was up to K. ... as the operator under the Terminalling, Off take and two of the three exploration Joint Operating Agreements to inform [sellers] at some point in time about the problems. If so, [sellers] would have reasonably led [buyer] to believe that they had been so informed and [buyer] could have relied on that.

[146]
However, none of the agreements referred to in the preceding paragraph, may be interpreted to that effect. The Off take Contract expressly provides in article 18 that the agreement does not constitute joint sales or marketing activities and that each party shall have the right separately to take its share of crude oil. Also, the Terminalling Contract deals only with the relationship between [sellers], K. ...BV and the Terminal Operator (now ... Q.) regarding the operational aspects of the Rijn Blend at the terminal facilities at Europoort including storage and despatch but does not affect the relationship between sellers and buyers of Rijn Blend. Finally, the Joint Operating Agreements deal with exploration and the upstream activities and not with the sales contracts.

[147]
The relationship between [sellers] and [buyer] are thus primarily governed by the sales contracts, which provide as operational contacts both the operator and the seller involved. On the basis of the sales contracts, no operator alone could bind any seller and both operational and commercial issues regarding the Rijn Blend contracts were to be handled respectively also by the seller or only by the seller involved.

[148]
On the basis of the above, the Arbitral Tribunal is of the opinion that [sellers] did not receive an immediate notification as required by article 71(3) CISG. Consequently, [buyer] should have taken delivery of the June 1998 instalment and is liable for damages incurred upon [sellers] in that respect only.

5.4 Other Issues

[149]
Since [buyer] is held not to be liable for breach of contract except as to the June 1998 delivery, the issues as to damages and the allocation of damages as between [sellers] do arise in that respect only.

[150]
In Exhibit 5a to the Statement of Claim, [sellers] have substantiated their losses in relation to the cover sale of June 1998 to LL. Petroleum Corp. totalling US $1,086,237.15 (including extra transportation costs) and have allocated these losses to each of the twelve sales contracts and, thus, to each of the [sellers].

[151]
[Buyer] has invoked that some of the cover sales were made to an affiliate of one of the [sellers] and were, thus, not on an arm's length basis. However, this does not apply to the first cover sale to LL. Petroleum Corp. as an unaffiliated company.

[152]
[Buyer] has challenged that [sellers] or each of them might be entitled to the amounts as claimed because they have not proven that these amounts correspond to their interest participations in the respective fields. [Buyer] has characterized this argument as an admissibility test and requested the Arbitral Tribunal to bifurcate proceedings on that basis.

[153] The Arbitral Tribunal during the proceedings has postponed a decision as to this issue and reserved its right to by-pass the request and -- possibly -- to render a final award.

[154]
The Arbitral Tribunal disagrees with [buyer] that the issue is one of admissibility. Since [sellers] were contracting parties to the Rijn Blend sales contracts, they had -- in the opinion of the Tribunal -- capacity and interest to bring proceedings and were admissible in their claims.

[155]
It is a matter of substance whether they are entitled to the relief they seek and, in that respect, have to proof that each of them suffered damages as claimed. The Tribunal thus understands [buyer]'s defence as one of substance and will treat it accordingly.

[156]
The issue of [sellers]' entitlements has been discussed during the June 2001 hearing. Subsequently, [sellers] have submitted further information and evidence to that effect (Exhibit A to the letter dated July 30, 2001). In the opinion of the Arbitral Tribunal, these documents sufficiently demonstrate or make it sufficiently probable that all [sellers] (as these have been modified during the proceedings) were licensees under the respective relevant exploration blocks and had the participation interests therein as claimed. To that rule, there is one exception, E. BV which is the ... vehicle participating in the offshore activities and which is not a licensee but derives its participation interest from the Mining Law Continental Shelf and other relevant regulations and Agreements of Cooperation concluded pursuant thereto.

[157]
The information submitted by [sellers] to the Arbitral Tribunal also demonstrates sufficiently that the participation interests are to be distinguished from the «cost companies» issue, which is the incorporation of a cost company for each separate production license. However, cost companies are production companies and are not the interest participants regarding the sales of the gas, oil and other products (such as Rijn Blend) from the Dutch offshore exploration activities.

[158]
On the basis of the evidence presented by [sellers] and subject to providing [buyer] with indemnities (see hereafter Nos. 170-173), the Arbitral Tribunal accepts the entitlement percentages of each [seller] corresponding to their respective interests participation as summarized in Exhibit A4 to the letter dated July 30, 2001 and the method of calculation and allocation of damages which is based on these respective percentages.

[159]
This implies that the following damages may be allocated to the respective [sellers] in relation to the June 1998 lifting only.

[160]
As to [seller] C. BV, it must be noted that it has been alleged and not contested that ... BV transferred its interests in the fields to [seller] C. BV and that such transfer and the assignment of the contract have been notified to [buyer]. Thus, [seller] C. BV is entitled to its predecessor's claims under the following contracts:

Contract No. 1	US$ 1,995.39
Contract No. 2	US$ 10,206.17
Total	US$ 12,201.56

[161] As to [seller] D. BV:

Contract No. 3	US$ 37,027.68

[162] As to [seller] D.A. BV:

Contract No. 4	US$ 34,711.76

[163] As to [seller] D.B. BV:

Contract No. 4	US$ 51,461.73

[164] As to [seller] E. BV:

Contract No. 5	US$ 668,161.04

[165] As to [seller] O. BV:

Contract No. 7	US$ 77,737.92
Contract No. 8	US$ 5,574.56
Total	US $ 83,312.48

By letter dated May 10, 2001, Counsel for [seller] O. BV wrote to the Arbitral Tribunal that O. BV had merged with O.A. ... and that it had ceased to exist. This fact not having being disputed, the total of US $83,312.48 may be added to the share allocation in the damages of O.A. ...(renamed O. ... BV, see same letter dated May 10, 2001).

As to O.A. ... BV's share, the following damages may be awarded:

Contract No. 7	US$49,273.74

Contract No. 8 US$ 1,689.62

Total US$ 50,963.36

O.A. ... BV's share in Contract No. 8 also includes the former entitlements and rights of Petron Exploratie BV in that contract which have been transferred and assigned to O.A. ...BV and notified to [buyer] (Annex 4, p. 4 to the letter dated July 30, 2001).

All this brings the total amount for O.A. ... BV to US $83,312.48 + US $50,963.36 = US $134,275.84-

O.A. ... BV having changed its name to O. ... BV, a total amount of US $134,275.84 is due to O. ... BV.

[166]
As to [seller] V. ...Inc.

Contract No. 9 US$18,123.36

[167]
As to [seller] X., it is not disputed that it transferred its interests and assigned its claims to X.B. on December 23, 1998 and notified [buyer] of said assignment on the same date (Exhibit A5 to the letter dated July 30, 2001). Consequently, the claim by ... is to be dismissed and the claim by X.B. is to be awarded regarding the June 1998 lifting. These damages are thus:

Contract No. 10 US$ 52,458.11

[168]
As to [seller] X.A.:

Contract No. 10 US$ 47,873.42

[169]
As to Y. BV, it remained undisputed that [seller] N. BV has transferred its interests and its claims to it in 2000. This transfer and assignment has been notified to [buyer] (and the Arbitral Tribunal) by letter of its Counsel dated March 12, 2001 and the relevant provisions of the agreement pursuant whereto the transfer and assignment have been made, having been submitted as Exhibit A6 to the letter dated July 30, 2001, N. BV no longer has an interest in pursuing its claim. Not formally having withdrawn its claim, its claim will be dismissed. Y. BV sufficiently having proven its entitlement by virtue of the assignment and transfer, will be allocated N. BV's share in the claim under contract No. 6 as per the below. Furthermore, Y. BV's share in Contract No. 11 includes the former entitlements and rights of ... BV in that contract which have been transferred and assigned to it and notified to [Buyer] (Exhibit A7 to the letter dated July 30, 2001). This brings Y. ... BV's share allocation to the following:

Y. BV (assignee of N. BV)

Contract No. 6 US$ 12,035.08

Y. BV (assignee of ... BV)

Contract No. 11 US$ 3,916.30

Y. BV

Contract No. 12	US$ 13,991.27
Total	US$ 29,942,65

[170]
Since the Arbitral Tribunal and [buyer] in determining entitlements in the production fields and under the contracts, is dependent upon information from [sellers], it is important that [buyer] -- after having paid damages to [sellers] as per the above -- will not be faced with subsequent claims. In this respect, reference is made to [buyer]'s additional comments and defence dated October 28, 2001 in which at pp. 1-3, [buyer] does not challenge the overall output by [sellers] of the relevant production fields but disputes [sellers]' respective interest shares and points to certain elements casting doubt about the way [sellers] have attempted to identify individual interest shares.

[171]
On the basis of possible flaws in the evidence presented by [sellers], the Arbitral Tribunal holds that [buyer] does not have an interest in challenging individual shares if the total amount is not challenged as well. On the other hand, [buyer]'s challenge as to individual shares is legitimate if it were to expose it to multiple subsequent claims and the risk of having to pay more than the overall damages. On balance, the Arbitral Tribunal accepts [sellers]' extensive evidence which make it sufficient probable that the actual entitlements correspond to its data, provided [sellers] give [buyer] sufficient security to protect it against any further exposure stemming from the Rijn Blend sales contracts.

[172]
[Sellers] have offered in the letter of their Counsel dated July 30, 2001, to provide indemnification from any further claims from any of the [sellers] and/or any companies with which [buyer] entered into sales agreements regarding Rijn Blend from the relevant production fields and from any other third parties claiming to have interests or rights under the relevant production licences or sales contracts.

[173]
The Tribunal will thus order that payment of damages by [buyer] is to be made subject to any [seller] providing any such indemnity.

[174]
[Sellers] also have instituted claims for obtaining damages in relation to their internal costs for an amount of *DFL* [Dutch florins] 131,958 up to the filing of the Statement of Claim and of *DFL* 100,956 after such filing. This part of the claim is dismissed. The Arbitral Tribunal has held that the Rijn Blend did not conform and that [sellers] were therefore not entitled to challenge [buyer]'s decision to suspend performance and to refuse delivery. To that conclusion, the Tribunal has made one qualification in relation to the June 1998 lifting where it has held that [buyer] is liable for not having given timely notification of suspension. However, the internal costs of [sellers] in relation to that element of liability and the June 1998 damages are too remote to be awarded. Also, it must be noted that [buyer] helped [sellers] in order to arrange

a substitute sale for the refused June 1998 lifting and that K. in the UK (and not [sellers]) were primarily involved in the June 1998 substitute sale.

[175]
Finally, parties have come to an agreement that the Dutch statutory interest rate is applicable (for [sellers], see letter dated October 29, 2001 and for [buyer], see letter dated October 28, 2001) and, thus, damages as determined in this award will be increased with the applicable Dutch statutory interest rate.

5.5 Counterclaims

[176]
In its statement of defence, [buyer] filed two counterclaims for annulment based on mistake and for dissolution for breach of contract. These were withdrawn in the Memorial of Rejoinder and Memorial of Reply in and Amendment of the Counterclaim dated June 18, 2001 and replaced in it with a conditional counterclaim for damages. These damages would be the higher price [buyer] had to pay to buy substitute condensate in view of [sellers]' breach of their contractual obligation to deliver conforming goods. The amount of damages would still have to be determined at a later stage.

[177]
In its Memorial of Rejoinder in the Counterclaim dated July 15, 2001, [sellers] -- under article 34 of the NAI Arbitration Rules -- objected to the amendment of the counterclaim because it was filed too late in the proceedings and would hinder them in their defence.

[178]
By letter dated August 21, 2001, the Arbitral Tribunal has dismissed [sellers]' objections to the amendment of the counterclaim, primarily because there was sufficient time left to respond and because the facts relied upon regarding the amended counterclaim were identical to those regarding one of the original counterclaims (dissolution).

[179]
In that same letter, the Arbitral Tribunal has indicated to the parties that it had not committed itself to rendering an interim or partial award first and subsequently a final award but that it was also considering one single award. Parties were consequently requested to prepare their case in such a way that the Arbitral Tribunal had all the information and arguments if it were -- for reasons of efficiency -- to decide to dispose of the case in one single award. Parties were granted an additional period of one month until September 21 to come forward with whatever evidence or arguments. By e-mail dated September 4, 2001, such period has been extended until October 21, 2001 and by e-mail dated October 22, 2001 until October 28, 2001.

[180]
[Buyer] submitted its additional observations on October 28, 2001 and [sellers] on October 29, 2001. In its additional observations dated October 28, 2001, [buyer], however, withdrew its alternative counterclaim without reservation. Thus, the Arbitral Tribunal does not have to address any counterclaims.

5.6 Arbitration Costs

[181]
[Buyer] having prevailed by and large in these proceedings, the Arbitral Tribunal holds that [sellers] are condemned to all of the costs of the arbitration including the administration costs with the exception of the administration costs in relation to the counterclaim.

[182]
The Administrator of The Netherlands Arbitration Institute has, in accordance with the provisions of Article 58(1) of the Rules, after consultation with the arbitrators, determined that their fees are Euro. The arbitrators' disbursements amount to Euro 643.99-. Consequently, the costs of the arbitration are as follows:

Administration Costs Netherlands Arbitration Institute in relation to the Claim:	Euro	7,997.88-
Administration Costs Netherlands Arbitration Institute in relation to the Counterclaim:	Euro	11,900.00-
Fees of the Arbitrators:	Euro	[...]
Disbursements of the Arbitrators:	Euro	643.99-
Costs Deposit Award	Euro	75.00-
TOTAL	Euro	[...]

The costs of the arbitration will be paid out of the payments and deposits made by [sellers] and [buyer].

[183]
...

[184]
...

[185]
[Sellers] having lost by and large these proceedings (except in relation to the June 1998 lifting), the Arbitral Tribunal holds that they shall bear their own costs regarding expert opinions, legal assistance and representation in preparing of and during these proceedings and shall pay an amount of Euro 50,000- for the costs incurred in this respect by [buyer].

[HOLDING]

On the basis of the considerations above and the rules of the laws of The Netherland, the Arbitral Tribunal:

1. Holds that it has jurisdiction over the disputes which have arisen between the parties and which have been submitted to it and declares that the claims and counterclaim are admissible;

2. Orders [buyer] to pay the following amounts:

To [seller] C. BV: an amount of US $ 12,201.56-;

To [seller] D. BV: an amount of US $ 37,027.68-;

To [seller] D.A. BV: an amount of US $ 34,711.76-;

To [seller] D.B. BV: an amount of US $ 51,461.73-;

To [seller] E. BV: an amount of US $ 668,161,04-;

To [seller] O. BV: an amount of US $ 134,275.84-;

To [seller] V. Inc.: an amount of US $ 18,123.36-;

To [seller] X.B.: an amount of US $ 52,458.11-;

To [seller] X.A.: an amount of US $ 47,873.42-;

To [seller] Y. BV: an amount of US $ 29,942.65-;

3. Orders [buyer] to pay interest on the amounts mentioned under 2. above at the applicable Dutch statutory interest rates for the period as of May 30, 2000 to the date of payment;

4. Orders each [seller], upon payment by [buyer], to provide [buyer] with an indemnity holding it harmless for possible further claims from any of the [sellers] and/or any companies with which [buyer] entered into sales agreements regarding Rijn Blend from the production fields P11a, P14a, P15a and b, P15c, P18a and P18c and from any other third parties claiming to have interests or rights under the production licences for the aforementioned fields or the Rijn Blend sales contracts;

5. Dismisses the claim filed by [seller] N. BV;

6. Dismisses the claim filed by [seller] X.;

7. Notes that the counterclaim filed by [buyer] has been withdrawn;

8. Orders that [sellers] will pay the following costs of these arbitral proceedings until and including the deposit of the award, any such costs amounting to Euro ...

9. Orders that [buyer] will pay the administration costs of the Netherlands Arbitration Institute fixed at Euro 11,900- in relation to its counterclaim;

10. Rules that the costs under 8. and 9. above shall be paid out of the deposits of ...

11. Declares that [sellers] will bear their costs for legal assistance and representation;

12. Orders that [sellers] will pay an amount of Euro 50,000- to [buyer] for its costs of legal assistance and representation;

13. Dismisses any other claims.

Made in eighteen copies, Rotterdam, October 15, 2002

Prof. Dr. F. De Ly *Mr. E.J. van Sandick* *Ir. L. Tjioe*