SUMMARY

After the early death of Jan Duiker, his compatriot Han van Loghem wrote: “By no means everything in Duiker is sound in the sense of the mathematical technique, and often not from the viewpoint of centuries long utility. But precisely this makes that his work contains the freshness of the continuously renewing nature”. (De Hollandsche revue, jrg 41, 1936, no 8, p. 366).

Van Loghem’s book Bouwen Bauen Building Batîr (1932) has been the only publication in Duiker’s life time in which some space was dedicated to his highly interesting entry for a competition for a riverside hotel in Salesel an der Elbe, now (Dolní) Zálezly nad Labem in the Czech-Republic.

In this article the writer has tried to understand the project with his knowledge of Jan Duiker’s work in general, from what Van Loghem published, and some additional drawings discovered and published in later years. Duiker’s archive contains nothing. A detective story.

KEY WORDS: Jan Duiker; competition; Salesel an der Elbe / (Dolní) Zálesly nad Labem; 1929/1930; modernity; design method

RESUMEN

Después de la temprana muerte de Jan Duiker, su compatriota Han van Loghem escribió: “No todo lo que ha hecho en Duiker es sólido en el sentido técnico de las matemáticas, y sobre todo desde el punto de vista de la utilidad a lo largo de los siglos. Pero precisamente esto hace que su trabajo contenga la frescura de la naturaleza que continuamente se renueva”. (De Hollandsche revue, jrg 41, 1936, no 8, p. 366).

El libro de Van Loghem Bouwen Bauen Building Batîr (1932) ha sido la única publicación sobre Duiker en vida, en cuyas páginas se estudió el único proyecto para un hotel junto al río en Salesel an der Elbe, ahora (Dolní) Zálezly nad Labem en la República Checa.

En este artículo, el autor ha intentado entender el proyecto con el conocimiento que tiene, en general, del trabajo de Jan Duiker, con lo publicado por Van Loghem y algunos dibujos adicionales descubiertos y publicados años más tarde. En el archivo de Duiker no hay nada. Ha sido una labor de detective.

PALABRAS CLAVE: Jan Duiker; concurso; Salesel an der Elbe / (Dolní) Zálesly nad Labem; 1929/1930; modernidad; método de proyecto.

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INTRODUCTION

I was in a very small settlement, Dolní Zálezly (Lower Salesel), on the river Elbe, south of Ústí nad Labem and at an hour drive from Prague, that in 1930 a hotel should be build on the north bank of the stream. Therefore a competition was held for which the Dutch avant-gardist Jan Duiker (Den Haag 1890 – Amsterdam 1935) delivered an entry; he would receive the second prize. Duiker’s brother-in-arms Johannes van Loghem published in 1932 part of the drawings of the project in his Bouwen bauen bâtir building (figures 1 and 2). C.A. Alberts with E.J. Jelles, also Delft trained engineer-architects, published in 1930 three facades of the project in their prize winning catalogue of the Nieuwe Bouwen (New Building) movement, architects-engineers trained at Delft Polytechnic.

The project was form part of an upcoming book about these three foremen of the Nieuwe Bouwen (New Building) movement, architects-engineers trained at Delft Polytechnic, but from a post-war generation, added in 1972 three facades of the Duiker 1930–1935. Nothing more seemed to have been kept about this competition in pertaining archives, just as it happened in the case of the better-known Chicago Tribune competition (1922) and in fact most of the other competitions, in which Jan Duiker and his colleagues Bernard Bijvoet and Jan Gerko Wiebenga ever took part. Still, the project is to use one of the most revealing in Duiker’s career. More so because we may suppose that in this case no other designer was involved. We haven’t found indications in pertaining archives, neither has Van Loghem mentioned any.

1. J.B. van Loghem in De Hollandsche revue, jrg 41, 1936, no 8.
2. Situation and floor plans as published by Van Loghem op. cit.; the situation drawing was printed in old German gothic letters says: Salesel an (der) Elbe.
3. See: Molema, Jan: Jan Duiker, works and projects (preface by Kenneth Frampton), Barcelona: Gustavo Gili, 1991 (English/Spanish). I add, that this article shall indicate the row of (linden?) trees on either side of the plot.

“By no means everything in Duiker is sound in the sense of the mathematical technique, and often not from the viewpoint of centuries long utility. But precisely this makes that his work contains the freshness of the continuously renewing nature.”

J.B. van Loghem in De Hollandsche revue, jrg 41, 1936, no 8.
THE COMPETITION

A quite late announcement appeared in the Zentralblatt der Bauverwaltung on 18 December 1929: Elbstrandhotel Salesel (Tschechoslowakei).5. Entries for the (international) competition, which a hotel building consortium (Hotelbauconsortium Aussig) had organized, could be sent till 8 of January 1930. A Christmas marathon! But, as we can deduct from the Aussiger Tagblatt, the announcement must have been made earlier, 12 November, while questions could be sent till 8 December.6. Entries should have arrived in Aussig (Usti nad Labem) by 16 December. It is all a bit confusing. We haven’t found the cause; commissioners may have asked for a delay or there may have been little response at first.

THE ORGANISERS

Lawyer Reichsrichter Dr. J. Schmidt in Aussig announced the competition in the press as representative of an anonymous Hotelbauconsortium, which planned to build several hotels along the Elbe reservoir under construction. The prize giving would be announced in all major newspapers and magazines, and an exhibition would be held.7. The project should present the most serviceable hotel organization and the most modern architecture. The hotel should further the tourism in the northern Bohemian Elbe valley, as its natural beauties deserve.8. The consortium predicted a row of hotels in the Elbe valley, as we read in the Reichenbergerzeitung on 28 October 1929. It had already acquired the necessary lots at the most attractive sites and would, after an open competition, present as their first project a Beach Hotel for Salesel.

PRIZE–WINNERS

There were three prizes to be given, together 16000 crowns; plus 5000 crowns to be spend on acquisitions.9. Already on 5 February the same periodical published the results: 7 entries. The jury gave the first prize to Ingenieur Rudolf Kupka und Architekt Ernst Pischke, Reichenberg; the second prize (5000 Kr.) went to Ingenieur J. Duiker (sic!), Amsterdam and the third prize to Architekt Adolf Meretich, Karlsbad. The design of Baurat Pusch, Dresden brought him 2000 Kr. The organisers also bought two entries for 1500 Kr. each from Architekt F. Schleisdisinger, Offenbach.10.

WHO WERE THEY?

Apart from the fact, that we would like to know who the other 69 competitors may have been – those who did not win anything but who may have kept their entries in their archives – we were eager to trace the winners, hoping to find more information about the question (the so-called Unterlagen should be somewhere) and the answers to that question.11.

Let us begin with the first prize: Ingenieur Rudolf Kupka und Architekt Ernst Pischke, Reichenberg (now Liberec). This Ernst Pischke must have been another of the well-known architect Ernst A. Pischke from Vienna.12. First of all because the winners were from Reichenberg in Bohemia. Secondly: Ernst A. Pischke wrote in his autobiography, that he came back from the USA right after the Wall Street disaster, on 29 October, on a French steamer, passing through France, visiting Le Corbusier, arriving by X-mas 1929 in Vienna, where he started working in January 1930. Could he have delivered his entry by January 8, as the information in the Zentralblatt announced as ‘First’? And why then not from Vienna, but from Reichenberg?13 But also, Ernst A. Pischke did not mention the project, while he should have been proud of having won the competition. All right, but do we find the truth? Could someone in Reichenberg/Liberec not trace the right Pischke? Or Rudolf Kupka? This is another story: the Zentralblatt mentions Kupka as engineer, not as architect. Internet has not provided me with any ‘Ingenieur’ Kupka, but I did find a Czech (rather Sudetendeutsch) architect Rudolf Kupka.14 He had been imprisoned in Siberia during the First World War. In a handwritten book, Deutscher Almanach, composed by one of his fellow prisoners in the Beresowska camp, a certain Artur Lang, we find someAUTOGRAPHS

This architect Rudolf Kupka had designed there. But, we found a few other clues: Architekt Rudolf Kupka (Reichenberg 1898, in 1931 active in Reichenberg) is mentioned in the Katalog der Sudetendeutschen Kunst–Ausstellung Nürnberg in the Norisnalle am Marenorientgarten vom 22. Februar bis 3. Mai 1931. Also, the catalogue does not contain any image of his work, though it mentions 5 sheets with ‘Ansichten und Innenaüme’ of the Strandhotel Salesel.15

Who were the others? Adolf Meretich, a quite produc- tive architect from Karlsbad/Karlovy Vary. He is mentioned in the same catalogue. And there is one publication with his works till about the mid 1930’s.16 This includes a pess- eptive of his prize-winning entry for Zálezly.

What about Baurat Pusch from Dresden? He was a man of some importance, and we did indeed find infor- mation about him on a few websites. Oskar Pusch was a German architect, regional historian and author. He wor- ked firstly in Leipzig, later in Dresden. There the Deutsche Bucherei (1916) is his best-known work.17

ONE MORE COMPETITOR

I somehow came across the name of Margarete Schütte- Lihotzky, who would have been amongst the competitors; and indeed the book about her, edited by Peter Noever, contains some material about the project, which she sent to Aussig; though in vain, no prize.18 Anyway this material...
THE PROGRAM

As we do not have the competition terms or conditions, we must read Duiker’s (and Schütte-Lihotzky’s) propos-
sal as such, unless the Unterlagen (conditions) are found. Many questions stay un-answered, because Duiker’s drawings only show us one of the three upper storeys with the bedrooms on a small scale, plus the main floor. Neither the ground floor nor the basement, if there were one. But Duiker must have followed the program strictly, as he was amongst the prize winners (figure 4).

THE SITE

It has been an exciting experience to search and find the exact location. Once it was clear to us, that ‘Salesel a.d. Elbe’ (as we read on Duiker’s drawings) was identical to Dolní Zálezly nad Labem in Czech, and Google Earth became available, Duiker’s drawings were precise enough to find the right location, despite local alterations. Especially the new through road along the Elbe River gave us problems. A simplifying factor turned out to be, that –apart from that new road- the gently sloping site is still practically un-built. The little community has kept it as a commons with a playing ground and a tennis court on the side. Also, Duiker’s drawings—though sketchy—are in fact very precise: an angle in the roadside (not a bend) is still there (figure 4).

THE EXACT LOCATION

The combination of the situation today with cadastral maps on the Internet and Duiker’s drawings gave us a fairly precise insight in the situation of the lot. Taking as a basic measure in Duiker’s plans the length of a bed, in those days 190 cm, we have been able to position both the eastern side is a straight line at a practically right angle in the site. What we have not found is the reason why nothing has been built is still an open question. It may have had to do with the developing political and social unrest in Bohemia.

THE BARRAGE AT SCHRECKENSTEIN

The idea of building a beach hotel here apparently relates to the construction of a dam in the Elbe some 20 kilo-metres downstream, to be ready in the spring of 1930. This would result in a lake-like situation with a higher, fairly precise insight in the situation of the lot. Taking as a basic measure in Duiker’s plans the length of a bed, in those days 190 cm, we have been able to position the correct in the site. What we have not found is the reason why nothing has been built is still an open question. It may have had to do with the developing political and social unrest in Bohemia.

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4. A view of the terrain with the researchers. The river dried up in the background, old through road at right.
5. A map of Salesel an der Elbe.

Duiker must have been aware (or was it mentioned in the “Unterlagen”?), that the Elbe can bring high floods, like we have seen in recent years. He levelled out most of the lot from the street towards the riverbed, and put the buildings on top. He even left the ground floor more or less open, or so it seems, the best way to avoid serious problems in eventual floods. As a real Dutch engineer he put the complex between two dams from the street towards the dam along the river, which he had to dig off partly to provide a beach for the guests. Thus the hotel gives the impression of a mail boat moored between the mottes of a harbour, very appropriate, and very ‘en vo-
gue’! (figure 5).

THE DAM

The dam would raise the water level in Zálezly approximately 4 meters, but sudden floods could be ex-
pected. And indeed, there is a mark from 2002 on a house opposite the site that indicates the water level ha-
v ing been more than three meters above street level39. Duiker’s hotel could still have had problems. The con-
sortium must have been in doubt about their plans. Why nothing has been built is still an open question. It may have had to do with the developing political and social unrest in Bohemia.

20. N10_ GRAN ESCALA
J. MOLEMA. “Jan Duilker: a river side hotel in Dolní ZálezlyNad Labem, Czech Republic 1929–1930”. N10 ... Mayo 2014. Universidad de Sevilla. ISSN 2171–6897 / ISSN e 2173–1616
DOI: http://dx.doi.org/10.12795/ppa.2014.i10.01

25. The same we find in Schütte-Lihotzky’s plan.
24. Schütte-Lihotsky’s entry, in the way it has been published, doesn’t help much either.
23. As we do not have the competition terms or conditions, we must read Duiker’s (and Schütte-Lihotzky’s) proposal as such, unless the Unterlagen (conditions) are found. Many questions stay un-answered, because Duiker’s drawings only show us one of the three upper storeys with the bedrooms on a small scale, plus the main floor. Neither the ground floor nor the basement, if there were one. But Duiker must have followed the program strictly, as he was amongst the prize winners (figure 4).
22. Concerning the competition 22. The excellent web site of the National Library in The Hague, which contains all Dutch important newspapers from 1618 on, neither shows any useable information 23.
21. Karel Teige prepared and edited the general report Die Wohnung für das Existenzminimum for the third CIAM Congress in Brussels in 1930. From 1922 to 1932 he edited the avant garde journal Statika (Building) and he also developed relations between Czech Modernists and leading figures abroad (e.g. Behne, Hannes Meyer, Le Corbusier, and the Van Eyck). 22. Neither, till today, have I come across the competition in other Dutch or foreign archives, except the Schütte-Lihotzky Estate in Vienna.
20. The book through does not contain all the material in Schütte-Lihotzky’s archive in the Universitätsbibliothek, Vienna.
29. A map of Salesel an der Elbe.
24. As we do not have the competition terms or conditions, we must read Duiker’s (and Schütte-Lihotzky’s) proposal as such, unless the Unterlagen (conditions) are found. Many questions stay un-answered, because Duiker’s drawings only show us one of the three upper storeys with the bedrooms on a small scale, plus the main floor. Neither the ground floor nor the basement, if there were one. But Duiker must have followed the program strictly, as he was amongst the prize winners (figure 4).
28. The post office at 100 Rudí Armády, Visible on Google Earth.
27. The only Dutch newspaper that mentions Salesel is the left wing Tribune, which brought two articles about the social unrest in Bohemia and the result of the local elections, 15 April and 29 May 1932.
26. The same we find in Schütte-Lihotzky’s plan.
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OTHER PROJECTS AROUND 1930 BY DUIKER (BIJVOET AND WIEBENGA)

At the moment that he had to send his proposal to Aussig, Duiker moved from Daniel Willinkplein to Mineralzaam in Berlage Zuider (Amsterdam). To a larger house where (for economic reasons) paying guests could be held. In 1928 they had sold their beautiful convertible Cévenl, as it had become too expensive to have a car. The money for the second prize for the Zálezly entry must have been welcomed. Duiker’s open-air school was under construction (opening 28 of June), and he was working on the design for its entrance building. The design for an open-air school at Zonneheide had just been presented, but fund raising for the realization was difficult. Late in the summer of 1930 the ephemerall ‘tea house’ at Zonneheide would open, at the time Duiker (with Bijvoet) received the commission for the nurses’ roundhouse at Zonneheide . Meanwhile Bijvoet was busy in Paris (Maison de Verre), and Wibenga as the municipal architect of Aalst .

FORM, STRUCTURE AND MATERIALS

The pentagon

Why would one choose a pentagon as the elementary form for (a part of) a building? How to trace an angle of 108 degrees when it is not necessary to do? Did Duiker have a drawing machine? Or did he just use a ruler, pear wood triangles (45 and 30/60 degrees) and a compass? Plus a triangle with a swiveling arm, which he could adjust to any desirable angle, in this case 108°? Duiker’s stepson Arthur Hofmans answers that initially ‘Jan’ had a drawing table with a parallel guide and two loose triangles just as mentioned. “The introduction in 1927 or 1928 of a Kühmann drawing machine (…) was a memorable happening. Jan was very pleased!” So a machine was available to draw the Salesie plan at the turn of the year 1928–30.

Was it the form (or the idea) that led Duiker to the pentagonal form? He clearly did not ‘orientate’ his building by using the north arrow, instead he put what seems the main axis in the situation drawing shown above on a right angle with the lake border, parallel to the east border line of the plot? But this ‘main axis’ in the situation drawing is somewhat misleading. It gives a bit too much emphasis on the pentagon part of the building. Duiker used three of the five axes of the pentagon for specific functions. The first with the ‘main’ axis and the inside/outside dance and music podium, a second defines the entrance part, a third one a rectangular block with rooms on the higher floors and meeting rooms on the main. The direction of that third axis of the pentagon seems to have defined the western limit of the lot, lying parallel to the side of the rectangle. This looks strange and should be explained.

Margaret Schütte-Lihotsky solves the problem . In her situation drawing the western border of the territory is exactly as Duiker drew it, including the same protrusion at the street side. Apparently it was a given line, not an invention of Duiker. This explains, I think, sufficiently the pentagon form as resulting from the inclination of the borders. Duiker must have become aware of the fact that there was an inclination angle of precisely 18°, which led to the angle of (90+18)=108° of the pentagon = x=18°. The pentagon contains 5 angles of 108°, which makes 540°. Circles

Le courbe est ruineuse, diRile et dangereux: elle para-}

The first circle in Bijvoet and Duiker’s œuvre we find in Bijvoet and Duiker’s work done and leaves the architect in peace. Why would one choose a circular surface? Because of its ratio. The proportion between circumference and surface area is optimal. A minimum of facade with a maximum of enclosed area. If we apply a polygon instead, the ratio shall become lower with fewer sides. The first circle in Bijvoet and Duiker’s œuvre we find in the refurbishment plan for the Rijswijkse Bank in The Hague (1918). The cylinder would have contained the bicycle shed on the ground floor, and would have soaked the edged corner in the exterior. The composition of this corner reminds us of what was ‘en vogue’ in Amsterdam School buildings, such as the so-called Schuyt by Michiel de Klier in Amsterdam Spoorwaggebouw . The first circle of larger dimension landed ‘out of the blue’ on top of the main building of Zonneheide (late 31. Source: Jan Duiker’s stepson Arthur Hofmans in his book Hofmans, Arthur: Herinneringen aan Jan Duiker, Lelystad/Rotterdam: MEDITekst, 1990.

32. Winning a competition can lead to most unpleasant results, as Duiker and Bijvoet had experienced in the competition for the National Academy for the Arts (Rijksacademie voor Beeldende Kunsten) in Amsterdam. The second prize brings money for the work done and leaves the architect in peace.

33. He could have done the same with a triangular, rectangular or any other regular polygonal figure. Thanks to a quick action of the directorate of the archive of the Universität für angewandte Kunst in Vienna, I received copies of the documents from her estate, pertaining to the competition. Which were very helpful indeed. I want to thank both Frau Silvia Herkt and Frau Natalie Roth from the Archiv der Univer- systät für angewandte Kunst Wien for their quick and adequate response to my questions.


35. This was 1929, computers were just dreamed of. Later on Duiker must have been able to draw parabolas though, for instance in his Cineac design.

36. Duiker and Schütte-Lihotsky discuss the problem. In their situation drawing the western border of the territory is exactly as Duiker drew it, including the same protrusion at the street side. Apparently it was a given line, not an invention of Duiker. This explains, I think, sufficiently the pentagon form as resulting from the inclination of the borders.

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38. Open Air School, Cliostraat Amsterdam; Van der Loo and Hoeks in Amsterdam Spaarndammerbuurt . The first circle of larger dimension landed ‘out of the blue’ on top of the main building of Zonneheide (late
8. Zonnestraal seen from the air during construction. The central Greek cross and the circular hood are clearly visible, as well as the round water tank and staircase.

9. Nurses House Zonnestraal. The structure of this single storey building realised by Duiker (and Bijvoet) reflects what Duiker had in mind for the upper part of the hotel.

10. League of Nations, preliminary floor plan. The plan, though totally different in scale from it, is very compatible with the ensemble of workshops and that of an open-air school at Zonnestraal.

11. Drawings on the basis of the available existing material, in which we have tried to make the spatial and material structure comprehensible as far as we could.

After the Salesel competition. At the same time the design of the roof 41. Why a circle on a square? I have no idea. Anyway, Zonnestraal also got a discernable cylindrical chimney and water tank 42.

Polygons and circles

By 1930 Duiker seems to have become a real fan of non-rectangular buildings. The mentioned circular rooftop of Zonnestraal got a variation in the ground plan for a maids’ house with eight sides and a round roof. This was replaced by a design with a dodecagon with a circular roof topped with a round skylight. This solely dated design by a design with a dodecagon with a circular roof, which was suggested by a design with a dodecagon with a circular roof, which was given him an opportunity to investigate its applicability and utility. We must remember, that already in their design for the League of Nations in Geneva (February 1927) the half-octagonal and cut hexagonal form had appeared in plan, while the full octagonal can be seen in the somewhat later plans for Hoogiovouw; but we do not find any other pentagon. The one in Salesel would be the only one in his career.

Whether Duiker was aware of the idea that “it’s all Golden Section!” Well, it is not. And the good reason is, that this proportion is not practical in the execution of a work. But when Duiker applies the pentagon, he must have accepted this impracticality for some reason.

Dimensions of the Project and the Situation

Neither Duiker nor Schütte-Lihotsky added any measurement of a work. But where Duiker applies the pentagon, he must have accepted this impracticality for some reason.

It is difficult to define the different measures of building and site. Duiker did the project in a short period. He was very able to do it, but in spite of that we found several irregularities in his plans, which makes conclusions risky. We checked the dimensions of the pentagon; the circles and the other ‘additions’ to the five-sided core. We have searched proportions between measures, and looked for simple dimensions. What we present here is a close approximation, as indicated based on the dimensions of the bed of 190 cm long 48, of materials in such a way as to achieve the effects desired.
LEAGUE OF NATIONS COMPETITION

Probably the first time Duiker and his friends proposed the use of glass bricks in large quantities was in their entry for the League of Nations competition, which they delivered early in 1927. The sketchy drawings we know of this project are similar to the first ones that Bijvoet made for the Maison de Verre. "Ber is now for some days in Geneva to study the plot for the League of Nations Headquarters competition, in which he wants to take part with Jan Duiker, and Weebergen." Co Bijvoet-Ezerman wrote this on 26 November 1926, with an addition on the margin on 3 December 1926. Bijvoet wrote on 24 February 1927: ‘But now it is really true (it is always slightly embarrassing to feel real truths) that in the last months we have passed a crisis that is really very suitable to blame for everything. You should know that we have made a design for the League of Nations, no kidding. And what is more: we have been able to deliver it (...)’

MEAGRE BUDGETS AND OTHER BUILDINGS

I do not know why Duiker has not made use of this highly transparent material in his most crystalline Dutch works, Zonnestraal in Hilversum and the Open Air School in Amsterdam (plans May 1927–August 1928). Too expensive maybe? Both were built on a meagre budget. Several not built designs for the SCALA cinema-cum-nightclub at Kleine Gartman-plantsoen in Amsterdam on the contrary show an abundance (1930–1934). It is only after Duiker’s death when the glass block plays a, in this case modest, role: in his last project, the Hotel Gooland, executed under Bijvoet. There is a peculiar corner in the cattle behind a stair, where the building touches the neighbouring plot. Glass for illumination was allowed, but no view outwards. In none of all these Dutch works we find paneled glass bricks. Who then, developed these? My daring idea is: Bijvoet, with the aid of Duiker, while discussing the procedure of the (pre-)fabrication of the façades for Zonnestraal, as mentioned above. Zonnestraal was by all means an experimental project. The façade elements were developed in situ and there is a variety of solutions. As the first buildings (main building and the Ter Meulen pavilion) opened in June 1928, we can safely place the start of this investigation a year before, mid 1927 (figures 12 and 13).

THE THIRD TECHNICAL SCHOOL IN SCHEVENINGEN, THE HAGUE

In June 1928, Duiker and Bijvoet received a new commission for this project. Very different from the first design à la Wright. Already the earliest perspectives show large quantities of glass bricks to be applied in the street façade in corridors and staircase. They show striking likeness again with the sketch Zorob rash shows us of the front façade of the Maison de Verre (figure 14).

52. For an explanation of this ‘trouvaile’ see: Jen Molena, id.
53. For Zonnestraal and its restoration see amongst other authors Wessel de Jonge in: Meurs, Paul and van Thoor, Marie-Thérèse (eds.): Zonnestraal Sanaturo, The History and Restoration of a Modern Monument, Rotterdam: NAi Publishers 2010.
54. Because of an economic crisis the first commission was taken back in 1924, probably one of the origins of Bijvoet’s emigration. The same happened to Berlage’s Museum for the Hague.
55. This commission is again an interesting fact in relation to the social background of the architects: the secretary of the Technical school in The Hague was the father of Jan Duikers brother-in-law. The responsible alderman was Johan Willem Alberda (SDAP), who around 1920 lived next door to the studio of Duiker and Bijvoet. He was also involved in Berlage’s commission for the Gemeentemuseum, The Hague, and in a way in the commission for Zonnestraal.
56. www.zoerad.nl

50. This has been unclar for a long time, since no archives of the three contains a set of finished drawings. An interesting side step: Karl Moser, member of the jury, sketched the peculiar ground plan, a hand with spread-out fingers, in his notebook (ETH Zürich, Karl Moser Archive). We find this form more than once in De Volharding and J.W.E. Buijs.
51. Here, as in the Maison de Verre we touch once more the problem of authorship. The first plans for the Open Air School wear both names Bijvoet and Duiker; on the contrary show an abundance (1930–1934). It is only after Duiker’s death when the glass block plays a, in this case modest, role: in his last project, the Hotel Gooland, executed under Bijvoet. There is a peculiar corner in the cattle behind a stair, where the building touches the neighbouring plot. Glass for illumination was allowed, but no view outwards. In none of all these Dutch works we find paneled glass bricks. Who then, developed these? My daring idea is: Bijvoet, with the aid of Duiker, while discussing the procedure of the (pre-)fabrication of the façades for Zonnestraal, as mentioned above. Zonnestraal was by all means an experimental project. The façade elements were developed in situ and there is a variety of solutions. As the first buildings (main building and the Ter Meulen pavilion) opened in June 1928, we can safely place the start of this investigation a year before, mid 1927 (figures 12 and 13).

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In June 1928, Duiker and Bijvoet received a new commission for this project. Very different from the first design à la Wright. Already the earliest perspectives show large quantities of glass bricks to be applied in the street façade in corridors and staircase. They show striking likeness again with the sketch Zorobash shows us of the front façade of the Maison de Verre (figure 14).

52. For an explanation of this ‘trouvaile’ see: Jen Molena, id.
53. For Zonnestraal and its restoration see amongst other authors Wessel de Jonge in: Meurs, Paul and van Thoor, Marie-Thérèse (eds.): Zonnestraal Sanaturo, The History and Restoration of a Modern Monument, Rotterdam: NAi Publishers 2010.
54. Because of an economic crisis the first commission was taken back in 1924, probably one of the origins of Bijvoet’s emigration. The same happened to Berlage’s Museum for the Hague.
55. This commission is again an interesting fact in relation to the social background of the architects: the secretary of the Technical school in The Hague was the father of Jan Duikers brother-in-law. The responsible alderman was Johan Willem Alberda (SDAP), who around 1920 lived next door to the studio of Duiker and Bijvoet. He was also involved in Berlage’s commission for the Gemeentemuseum, The Hague, and in a way in the commission for Zonnestraal.
56. www.zoerad.nl
CONCRETE OR STEEL

In later years Duiker would apply steel frames, but around the time of the Salesel competition he would still use concrete, as may be visible in the drawings we know. We have tried to analyse the whole structure, but this seems to be an impossible task with the available documents (or rather the published copies of these). The rectangular part may give us a clue. Duiker seems to have been excited by the patent he had obtained in 1926 with Bernard Bijvoet and Jan Gerko Wiebenga, obtained in 1926. (Patent published by C.A. Alberts and J.J. Jelles in: Jan Duiker 1890-1935.)

This system the three elaborated in what we see in the main complex of the Sanatoria Zonnestraal, most clearly in the pavilions: an equilibrated system of two (or more) T-beams on columns, poured in situ. It is not difficult to see that this has been applied in the substructure of the rectangular part of the Salesel building. But how would Duiker use it in the circular (pentagonal) part of it? Was it all at applicable? While we can imagine it in the drawings that we know there are no measures; there is only one section, and some floor plans are missing. We have no details. Yet, there is something to add. As said before, the explicit line in the small situation drawing published by Van Loghem, which is running through the centre points of the pentagon and the small circles and parallel to the eastern borderline, is somewhat misleading. We should look at the situation and the plan in such way, that the western limit lies horizontal, as Van Loghem did with the axonometry. Then we see the pentagon, though very present by its form, becoming less dominant in plan. The mathematical consequence of the form of the site, not a preconceived desired centralised space form.

The grid, that I introduce, gives more attention to the rectangular part of the plan. We see now, though we have to be careful with our conclusions because of the bad quality of the available drawings in the publications, that several parts fit in this grid of (approximately) 15x15 meters and subdivisions. The rectangle includes the long north-south wall of the large triangular part of the basement, the same line goes right through the centre of the pentagon. Also does the east-west centre line of the whole rectangular bloc. This point was determined as the functional pivot centre of the complex. Yes, but there is more: Duiker managed in this way to have another proportionally related grid following the eastern boundary! Now everything, including the different circles turn out to be defined by the grid and the proportion 1:3 or 1:4, consequence of the inclination of the border lines.

I guess that Duiker, after noting the angle between both sides being 18°, which led him to the pentagon, began to draw a grid parallel to the western boundary. Such a grid we see on some of the drawings for the League of Nations complex for instance. The basic measure of the grid as we deduced it may not be 100% precise, but its visible position seems to have been defined by the grid. This is how far I could come in tracing the design route, that Duiker choose. I leave it to the reader to study the drawings in this article and see what (s)he can add or

Here begins to falter our understanding of the structure with its impressive cantilevers of beams and slabs. Also because in the upper floors Duiker introduced in both parts a system of load bearing separations between the rooms, at any rate in the circular part not coinciding with the main floor structure. For the circular part we can compare with the already mentioned nurses’ house at Zonnestraal. Is it possible that Duiker thought of the upper parts as an integral box-like concrete structure of floors and walls forming one still whole, placed on a set of columns and beams? Would this be a combination of the round house at Zonnestraal in the upper floors and the Open Air School in Amsterdam in the substructure, including the main floor (with the ‘Gasteraum’, the central hall)? Or should we see the structure of the lower part of the pentagon as we draw it: a T-beam in a roundabout way on 15-columns with a cantilevering floor slab on both sides? Whatever the case, one must take into account what Duiker designed before, as well as what he drew afterwards. Unless the lacking drawings (the other floors and sections) turn up one sunny day. Little else I can say about the main structure.

PROBLEMS

One may want to compare Duiker’s solution with (what we know about) Schütte-Lihotzky’s entry. Her’s seems more modest in plan and spatial composition, but gives us some understanding of the different functions in the complex, such as the covered car parking, which in Duiker’s design we must imagine being placed in the (unknown) lower floor, probably in the triangular part between the street and the river on the eastern side of the lot, its roof forming a large terrace with a row of ‘coiffé’ Linden trees. What to say about materials, colours, details, about functions like the breakfast and dining rooms, what about the conductus (see for instance the toilets on the guestroom floors), there are many questions left, occasionaly by the lack of documents and descriptions, though comparison with the realised works of course can help to imagine several aspects, such as the colours: “Duiker” blue, white, some pure yellow, aluminium paint on steel elements, black.

57. The black belts on either side of the beach.

58. The black belts on either side of the beach.
adjust. Well–documented solutions are understandably more than welcome (figure 16).

CONCLUSION

One wonders, when comparing the two known solutions, why Duiker choose such a complex, if not complicated, solution. Schütte–Lihotsky’s building simply follows the direction of one border line, while Duiker seeks to combine those of both limits. But Duiker’s Elbenixe would certainly have been one more of his most exiting buildings.

Shortage of information makes it difficult to analyse the project in every aspect. This may be the reason, that other authors have underestimated it. At least this has in the past been the case for the author of his article. The fact that, to my knowledge, never anything has been published about the projects of the competition has been sufficient reason for me to do my research in the context of our book about Jan Duiker, Bernard Bijvoet and Jan Gerko Wiebenga. This text I prepared specifically for PROYECTO, PROGRESO, ARQUITECTURA.

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