

Application for Consent to conduct  
Marine Scientific Research

Date: 28.01.2019

1. General Information

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| 1.1 Cruise name and/or number: WH III 429, 14.08.2019 – 03.09.2019 |
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|                                |                                       |
|--------------------------------|---------------------------------------|
| 1.2 Sponsoring Institution(s): |                                       |
| Name:                          | Thünen Institute of Fisheries Ecology |
| Address:                       | Herwigstr. 31, 27572 Bremerhaven      |
| Name of Director:              | Dr. R. Hanel                          |

|   |                                      |
|---|--------------------------------------|
| 1.3 Scientist in charge of the Project: |                                      |
| Name:                                   | Dr. Thomas Lang                      |
| Country:                                | Germany                              |
| Affiliation:                            |                                      |
| Address:                                | Herwigstraße 31<br>27572 Bremerhaven |
| Telephone:                              | +49 471 94460-223                    |
| Fax:                                    | +49 471 94460-099                    |
| Email:                                  | thomas.lang@thuenen.de               |
| Website (for CV and photo):             | www.thuenen.de                       |

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| 1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project: |  |
| Name:  |  |
| Affiliation:   |  |
| Address:   |  |
| Telephone:   |  |
| Fax:   |  |
| Email:   |  |
| Website (for CV and photo):  |  |

2. Description of Project

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| 2.1 Nature and objectives of the project:<br>Monitoring of the occurrence of fish diseases and biological effects of contaminants, OSPAR monitoring, Bottom trawling, plankton (neuston) sampling sea surface, sediment sampling, hydrography |
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| 2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project: |
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| 2.3 Relevant previous or future research projects:<br>Cruise No. 377, RV Walther Herwig III, 28.08.-17.09.2014 |
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| 2.4 Previous publications relating to the project: |
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### 3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet.

52,766667 – 58,4170 N / -2,166667 – 16,00000 E

Locations of sampling areas in waters of the coastal State are shown on the map attached. Exact positions for trawling, sediment sampling and hydrography within the sampling areas cannot be provided in advance because decisions on trawling positions are made flexibly based on echo sounder findings and weather conditions.

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical

Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment.

### 4. Methods and means to be used

#### 4.1 Particulars of vessel:

|   |   |
|---|---|
| Name:   | FRV Walther Herwig III  |
| Type/Class:   |   |
| Nationality (Flag State):   | German  |
| Identification Number (IMO/Lloyds No.):   | IMO 9048392   |
| Owner:  | Federal Republic of Germany   |
| Operator:   | Bundesanstalt für Landwirtschaft und Ernährung,<br>Referat 524, Haubachstr. 86, 22765 Hamburg,<br>Niels Grube - Tel: +49 (0)228 6845 5534 |
| Overall length (meters):  | 63,18 m   |
| Maximum draught:  | 6,20 m  |
| Displacement/Gross Tonnage:   | 2131  |
| Propulsion:   | Diesel / Diesel Electric  |
| Cruising & maximum speed:   | 11,5 – 14,5 knots   |
| Call sign:  | D B F R   |
| INMARSAT number and method and capability of communication (including emergency frequencies): | Phone +870 773 236 187 (Bridge)<br>Fax +870 783 209 565<br>Email:<br>Wherwig.kapitaen@fischereiforschung.eu                               |
| Name of Master:   | Vandrei, Jürgen   |
| Number of Crew:   | 21  |
| Number of Scientists on board:  | 12  |

#### 4.2 Particulars of Aircraft:

|                                       |  |
|---------------------------------------|--|
| Name:                                 |  |
| Make/Model:                           |  |
| Nationality (flag State):             |  |
| Website for diagram & Specifications: |  |
| Owner:                                |  |
| Operator:                             |  |
| Overall Length (meters):              |  |
| Propulsion:                           |  |
| Cruising & Maximum speed:             |  |
| Registration No.:                     |  |

|   |  |
|---|--|
| Call Sign:  |  |
| Method and capability of communication (including emergency frequencies): |  |
| Name of Pilot:  |  |
| Number of crew:   |  |
| Number of scientists on board:  |  |
| Details of sensor packages:   |  |
| Other relevant information:   |  |

|   |  |
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| 4.3 Particulars of Autonomous Underwater Vehicle (AUV):                   |  |
| Name:   |  |
| Manufacturer and make/model:  |  |
| Nationality (Flag State):   |  |
| Website for diagram & Specifications:                                     |  |
| Owner:  |  |
| Operator:   |  |
| Overall length (meters):  |  |
| Displacement/Gross tonnage:   |  |
| Cruising & Maximum speed:   |  |
| Range/Endurance:  |  |
| Method and capability of communication (including emergency frequencies): |  |
| Details of sensor packages:   |  |
| Other relevant information:   |  |

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| 4.4 other craft in the project, including its use: |
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| 4.5 Particulars of methods, full description of scientific instruments to be used(for fishing gear specify type and dimension) and location |                      |                                       |  |
|---|----------------------|---------------------------------------|--|
| Types of samples and Measurements:  | Methods to be used:  | Instruments to be used:               | To be carried out within 12nm (yes or no): |
| Fish  | Bottom Trawling      | 140' bottom trawl (see attachment)    | no   |
|   |                      | GOV with rock hopper (see attachment) | no   |
| Plankton (Neuston)  | Sea surface sampling | Neuston net according to David/Hempel | no   |
| Sediment  | Sediment sampling    | Van Veen grab                         | no   |
| Hydrography   | CTD Measurement      | CTD                                   | no   |

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| 4.6 Indicate nature and quantity of substances to be released into the marine environment: |
| none   |

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| 4.7 Indicate whether drilling will be carried out. If yes, please specify: |
| no   |

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| 4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude: |
| no  |

## 5. Installations and Equipment

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| Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements): |
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|      |
|------|
| none |
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## 6. Dates

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| 6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms: |
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| Although the sampling plan has to be made in a flexible way, e.g., depending on weather conditions and success of sampling, it is expected that WH III will enter waters of the coastal State in the first week of September and will depart 4 days later after having visited areas N22, N04 and N06. |
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| 6.2 Indicate if multiple entries are expected: |
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| no |
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## 7. Port Calls

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| 7.1 Dates and Names of intended ports of call: |
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| none |
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| 7.2 Any special logistical requirements at ports of call: |
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|    |
|----|
| no |
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| 7.3 Name/Address/Telephone of shipping agent (if available): |
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|    |
|----|
| no |
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## 8. Participation of the representative of the coastal State

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| 8.1 Modalities of the participation of the representative of the coastal State in the research Project: |
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| Participation is not possible because accommodation is not available. |
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| 8.2 Proposed dates and ports for embarkation/disembarkation: |
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|---|
| 14.08.2019 Bremerhaven for embarkation, 03.09.2019 Bremerhaven for disembarkation |
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## 9. Access to Data, Samples and Research Results

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| 9.1 Expected dates of submission to coastal State of preliminary report, which should include |
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| The expected dates of submission of the data and research results: |
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| No preliminary reports issued |
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| 9.2 Anticipated dates of submission to the coastal State of the final report: |
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|                          |
|--------------------------|
| 31.05.2020 at the latest |
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| 9.3 Proposed means for access by coastal State to data (including format) and samples: |
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|                                       |
|---------------------------------------|
| Direct contact to scientist in charge |
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| 9.4 Proposed means to provide coastal State with assessment of data, samples and Research results: |
| Direct contact to scientist in charge  |

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| 9.5 Proposed means to provide assistance in assessment or interpretation of data, samples<br>And research results: |
| Direct contact to scientist in charge  |

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| 9.6 Proposed means of making results internationally available: |
| Publication, submission of data to the ICES Data Centre         |

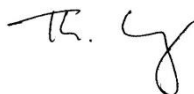
10. Other permits Submitted

|   |
|---|
| 10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending): |
| none  |

11. List of Supporting Documentation

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| 11.1 List of attachments, such as additional forms required by the coastal State, etc.: |
| Map<br>Excel file with coordinates of sampling areas<br>Gear specification forms        |

Signature:



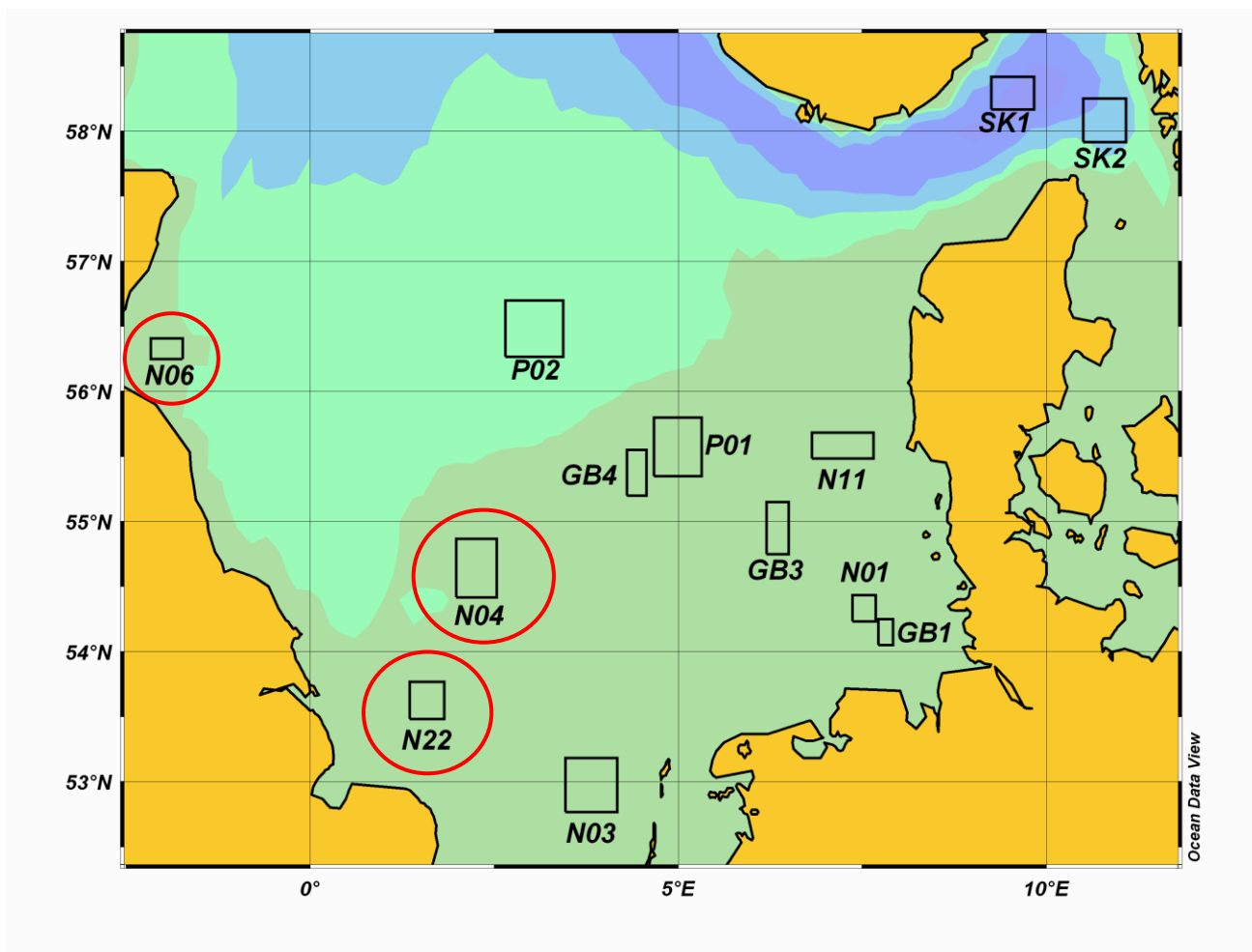
Contact information of the focal point:

|              |                                       |
|--------------|---------------------------------------|
| Name:        | Dr. Thomas Lang                       |
| Country:     | Germany                               |
| Affiliation: | Thünen Institute of Fisheries Ecology |
| Address:     | Herwigstraße 31<br>27572 Bremerhaven  |
| Telephone:   | +49 471 94460-223                     |
| Fax:         | +49 471 94460-099                     |
| Email:       | thomas.lang@thuenen.de                |

**Table 1:** Cruise 429 FRV “Walther Herwig III”, 14.08. – 03.09.2019, Geographical coordinates

| <i>North Sea</i> |                         |                           |
|------------------|-------------------------|---------------------------|
| <i>Area</i>      | <i>Latitude</i>         | <i>Longitude</i>          |
| N04              | 54°25.00'N - 54°52.00'N | 001°59.00'E - 002°32.00'E |
| N06              | 56°15.00'N - 56°24.42'N | 001°44.00'W - 002°10.00'W |
| N22              | 53°29.00'N - 53°46.00'N | 001°21.00'E - 001°49.00'E |

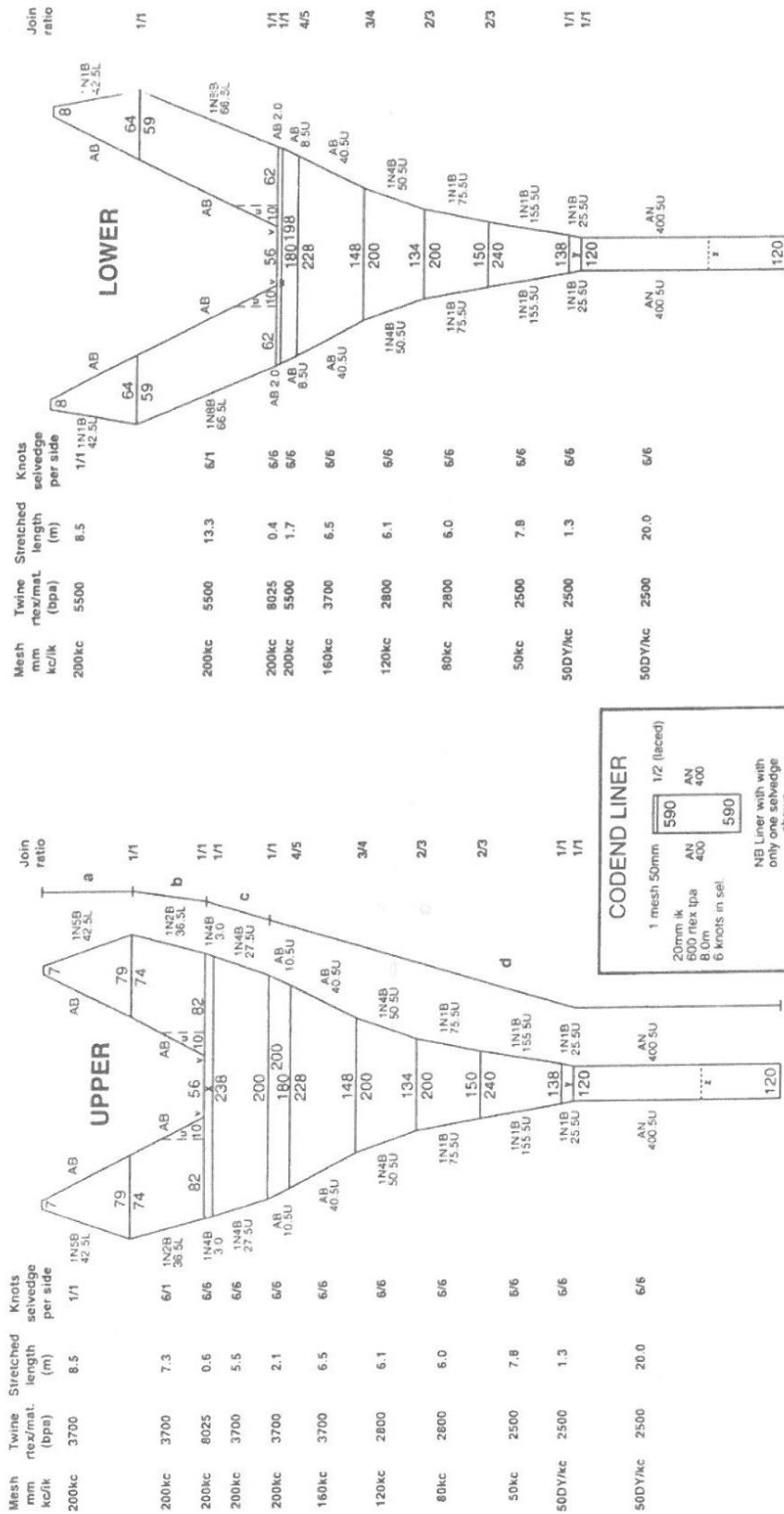
**Fig. 1:** Cruise 429 FRV “Walther Herwig III”, 14.08.2019 - 03.09.2019, Location of sampling sites, North Sea



Area N22 and N04 waters off England.  
 Area N06 waters off Scotland.

# GOV standard fishing gear (trawl construction)

Construction of the 36/47 GOV trawl (adapted from drawings of the Institute des Peches Maritimes, Boulogne/Mer)



**Legend:**  
 kc = knot centre to knot centre  
 ik = inside knot measurement  
 tpa = polyamide twine/twisted  
 bpa = polyamide twine/braided  
 dy = double yarn  
 Method of join used, sewing.  
 Type of knot, weavers knot.

**u** - Gussets 8025rtex  
**v** - 4 meshes gathered at quarters  
**w** - 200 198  
**x** - 240 238  
**y** - 138 120  
**z** - Joining position for Liner

**CODEND LINER**  
 1 mesh 50mm 1/2 (laced)  
 590  
 20mm ik AN  
 600 rtex tpa AN  
 8.0m 400  
 6 knots in sel. 590  
 NB Liner with only one selvedge shown

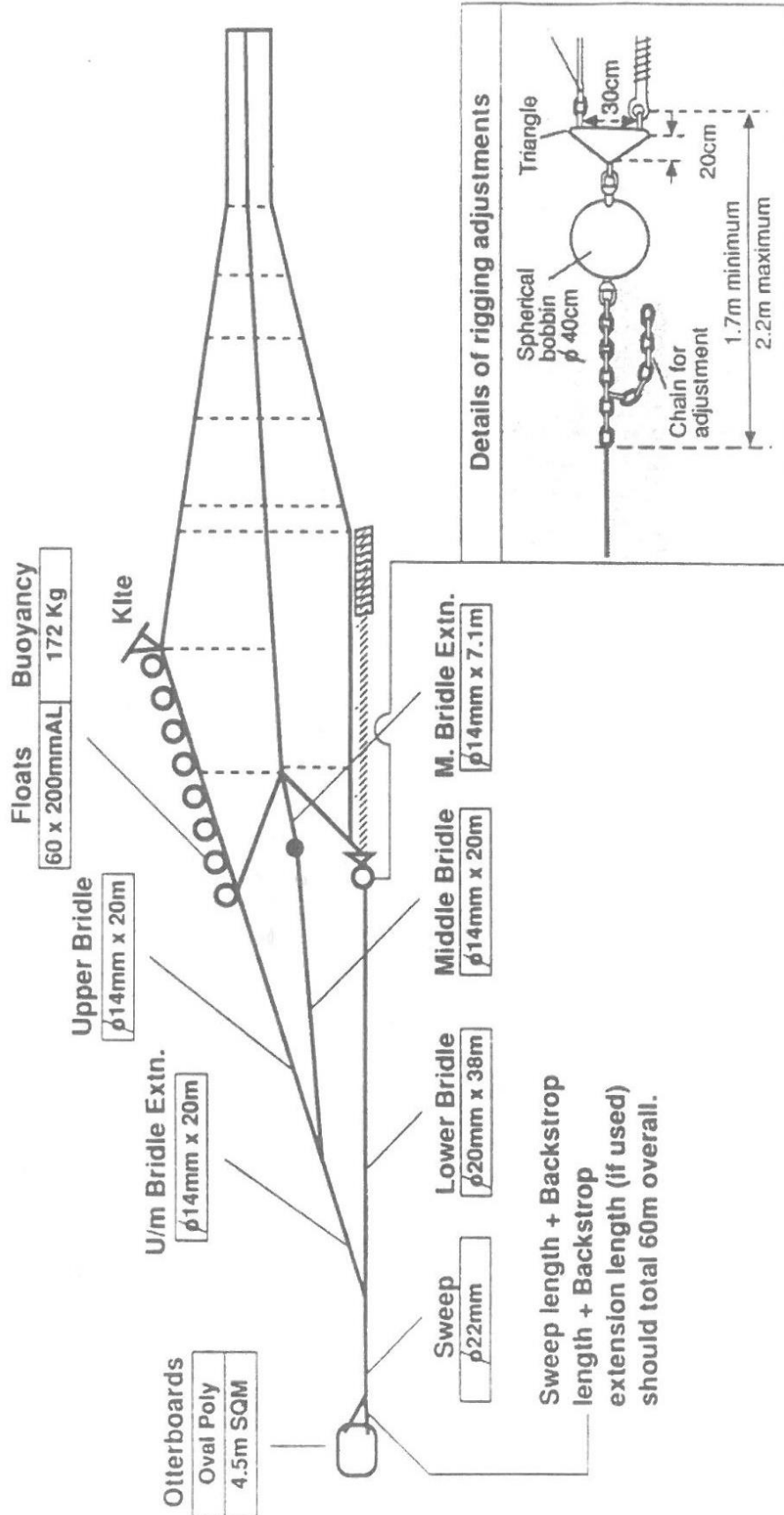
**Headline :** 36m (15.50 + 5.00 + 15.50) x 14mm ø wire (f/c) served (6/19 - 12/6/1 65.8kg/100m).  
**Fishingline :** 47.20m (21.10 + 5.00 + 21.10) x 22mm ø combination wire 6 strand/steel core 54.6kg/100m).  
**Winglines :** Upper 8.2m, Lower 8.2m x 20mm ø combination wire (6 strand/steel core 54.6kg/100m)

**a** - 7.1m x 14mm ø wire (6/19 - 12/6/1 - 65.8kg/100m)  
**b** - 6.7m x 20mm ø combination wire (6 strand/steel core - 54.4kg/100m)  
**c** - 5.55m x 20mm ø combination wire (6 strand/steel core - 54.4kg/100m)  
**d** - length for length x 22mm ø nylon (3 strand - 26kg/100m)

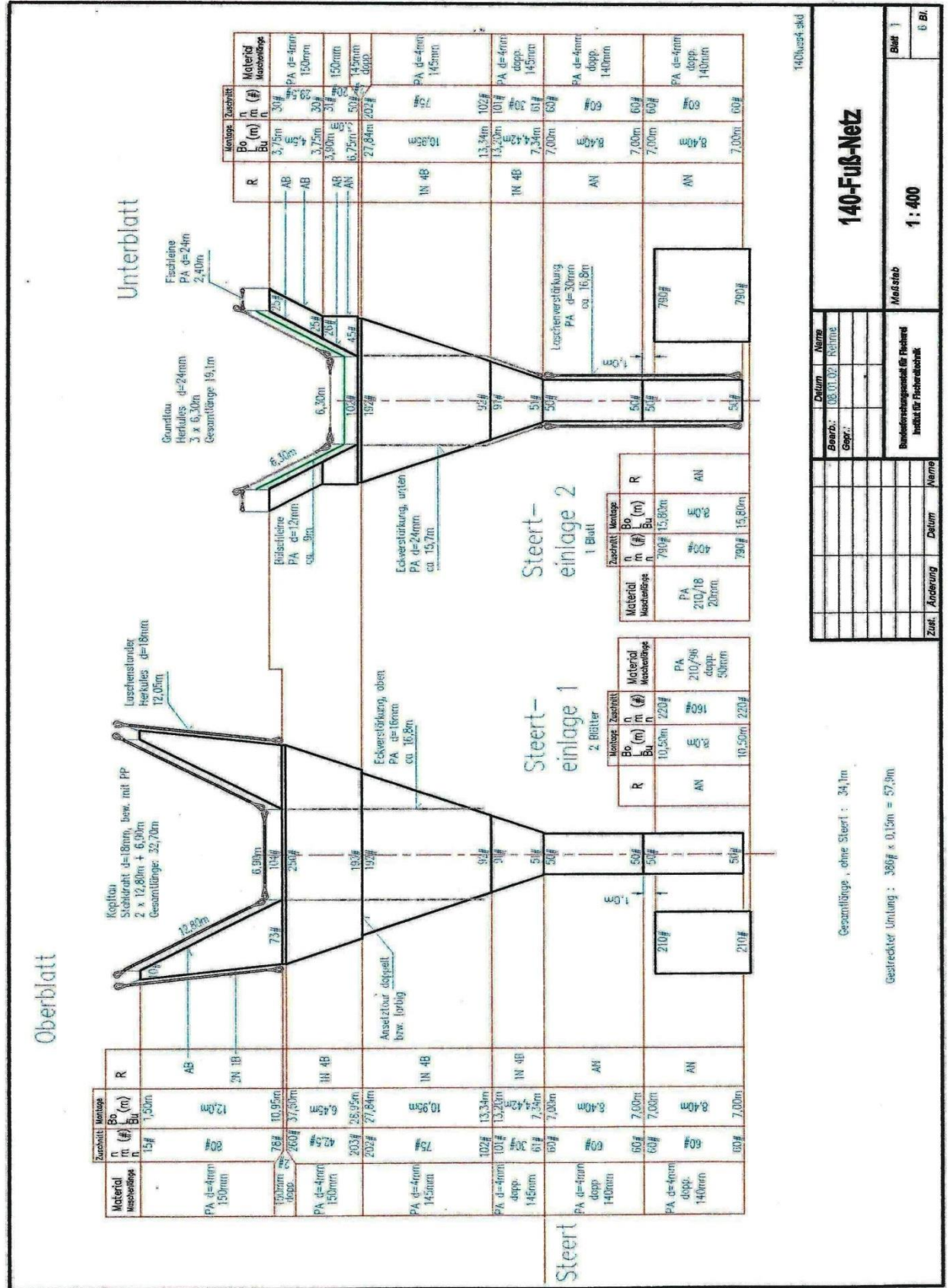
**NOTE TO NETMAKERS**  
 The numbers of meshes shown for netting panel widths do NOT include selvedge meshes. Five meshes (six knots) per selvedge must be added where indicated. Conversely to obtain panel depths one row (1/2 mesh) must be subtracted from each panel as the joining row is included in the number of meshes deep. The total numbers of meshes (width and depth) for each individual panel are set out in GOV 36/47 Groundfish Survey Trawl Checklist (Page 2 of 5).

GOV standard fishing gear (rigging)

GOV 36/47 GROUND FISH SURVEY TRAWL : Overall rigging diagram







Oberblatt

Unterblatt

| Material          | n (#) | Bo (m) | Zuschl. Montage | R     |
|-------------------|-------|--------|-----------------|-------|
| PA d=4mm<br>150mm | 15#   | 1,50m  |                 | R     |
| PA d=4mm<br>150mm | 20#   | 12,0m  |                 | AB    |
| PA d=4mm<br>150mm | 20#   | 10,95m |                 | 2N 10 |
| PA d=4mm<br>150mm | 20#   | 37,30m |                 | AB    |
| PA d=4mm<br>150mm | 20#   | 28,95m |                 | IN 4B |
| PA d=4mm<br>145mm | 20#   | 27,84m |                 | IN 4B |
| PA d=4mm<br>145mm | 102#  | 13,34m |                 | IN 4B |
| PA d=4mm<br>145mm | 61#   | 7,35m  |                 | AN    |
| PA d=4mm<br>140mm | 60#   | 7,00m  |                 | AN    |
| PA d=4mm<br>140mm | 60#   | 7,00m  |                 | AN    |
| PA d=4mm<br>140mm | 60#   | 7,00m  |                 | AN    |
| PA d=4mm<br>140mm | 60#   | 7,00m  |                 | AN    |

| Material  | n (#)      | Bo (m) | Zuschl. Montage | R  |
|-----------|------------|--------|-----------------|----|
| PA d=4mm  | 790#       | 15,80m |                 | R  |
| PA 210/18 | 20mm       | 5#     |                 | AN |
| PA 210/96 | dopp. 50mm | 5#     |                 | AN |

Steert- einlage 1

Steert- einlage 2

Gesamtlänge, ohne Steert : 34,1m  
 Gestreckter Umfang : 386# x 0,15m = 57,9m

140-Fuß-Netz

1 : 400

| Boarb. Datum | Boarb. Name | Boarb. Datum | Boarb. Name |
|--------------|-------------|--------------|-------------|
| 03.01.02     | Rehme       |              |             |

| Zust. | Änderung | Datum | Name |
|-------|----------|-------|------|
|       |          |       |      |

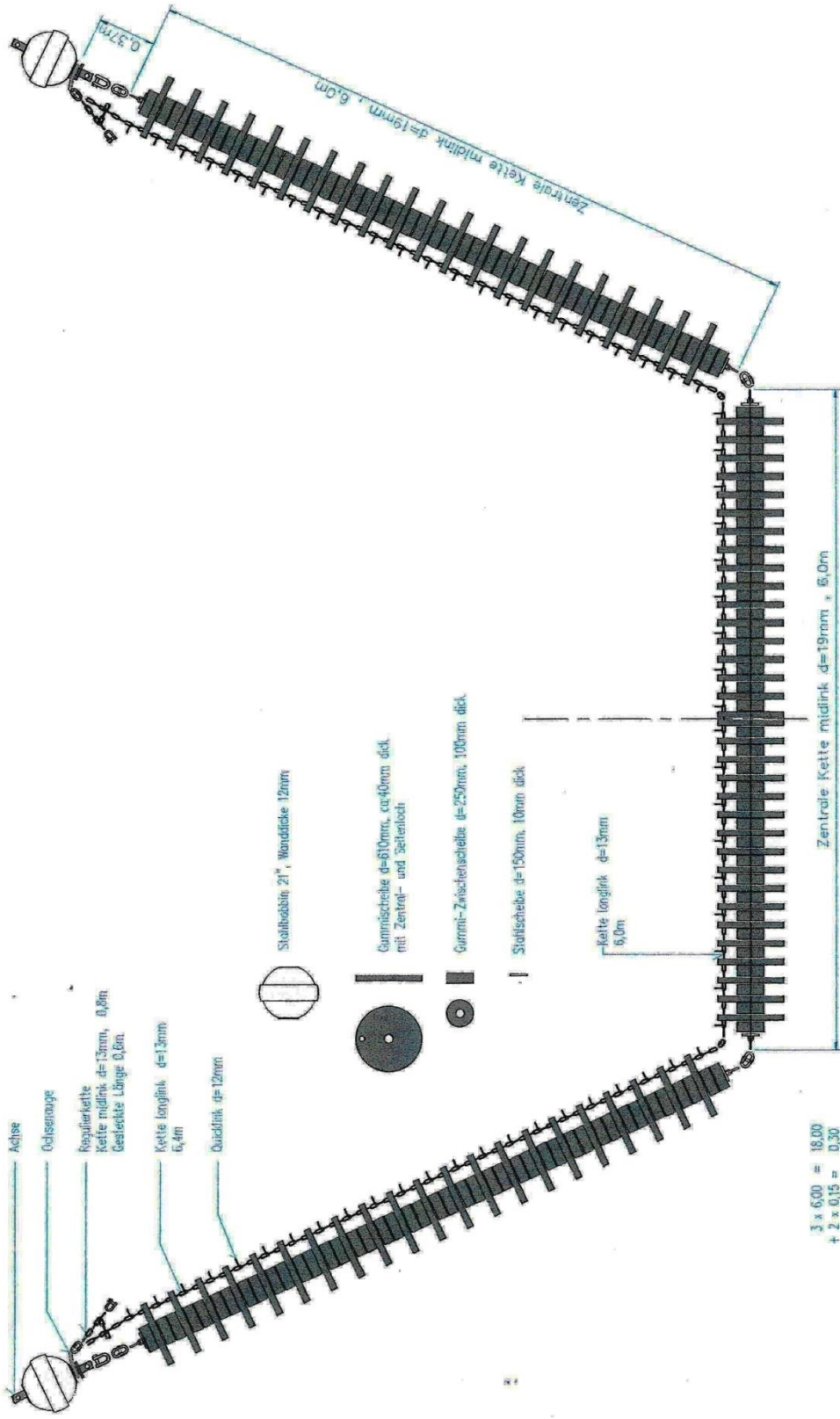
  

| Material        | Boarb. Datum | Boarb. Name |
|-----------------|--------------|-------------|
| Bearb. 03.01.02 |              | Rehme       |

Berechnungsstellen für Fischerei  
 Institut für Fischereibau

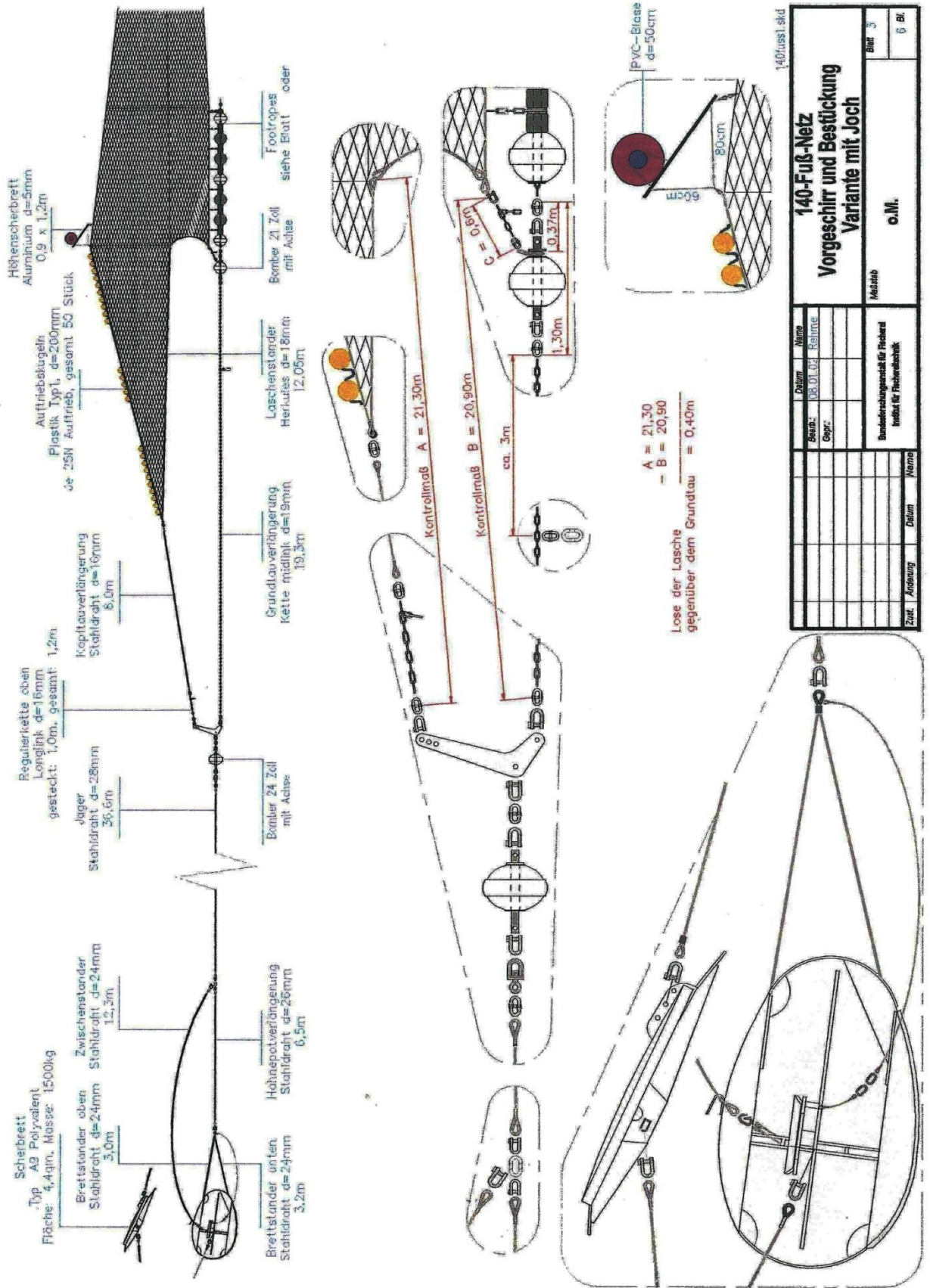
Blatt 1  
 6 Bl.

140Fuß-netz-skid



140fusfs.skd

|   |               |  |      |                   |
|---|---------------|--|------|-------------------|
| <b>140-Fuß-Netz</b><br><b>Footropes 2:</b><br><b>Rockhopper</b> |               | <b>c.M.</b><br>Meßstab                                       |      | Blatt: 6<br>6 Bl. |
| Datum<br>Bezb.: 08.01.02<br>Gepr.:                              | Name<br>Kette | Bundesarchivamt für Fischer<br>Institut für Fischereitechnik |      |                   |
| Zust.   | Änderung      | Datum  | Name |                   |



| Datum   |          | Name   |      |
|---|----------|--------|------|
| Benr.:  | 18.01.04 | Reihe: |      |
| Gepr.:  |          |        |      |
| Baudienstleistung für Fischer Institut für Fischereibau |          |        |      |
| Zust./  | Änderung | Datum  | Name |
|   |          |        |      |
| Mitarbeiter   |          | o.M.   |      |
| Blatt   | 5        |        |      |
|   |          | 6 Bl.  |      |

**140-Fuß-Netz**  
**Vorgeschirr und Bestückung**  
**Variante mit Joch**