Under greater length hook legs $l_n = 20–30$ m their it is impossible consider rectilinear. In this case their features necessary to get the way of the numerical decision of the problem Koshi for differential equations of the balance of the tightrope in flow (5).

On base MM (7) is designed program CM-LongLine (Computer Modeling LongLine) [3], working in ambience Borland Delphi and allowing prototype the longline, выметаемые both parallel current, and under any angle to current. She consists of set of the programs, which can work as autonomous, prototyping separate elements of the tier, so and system, prototyping whole tier. The Main form of the programme complex of the modeling tier is shown on Fig. 6.

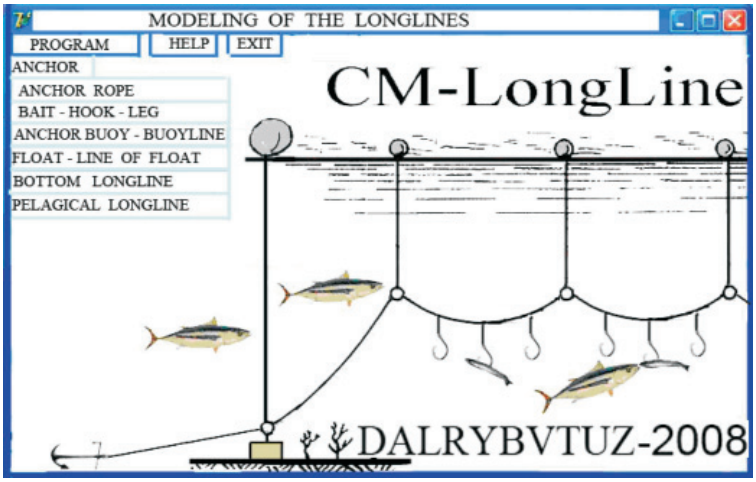

Fig. 6. Main form of the programme complex of modeling horizontal hook longline fishing order with account of the currents CM-LongLine (Computer Modeling Long-Line)

This form contains seven buttons: «Anchor», «Anchorline», «Bait-hook-leg», «Anchor – buoy – buoyline», «buoyline», «bottom longline with buoy in the middle each section», «longline with buoy on end of each section» by means of which are included corresponding to program.

Conclusion

The system differential equations of the balance of the rope in resting liquids (3) and system differential equations of the balance of the in flow (6), and equations of the balance of the manline (7) allow to solve the broad class of the fishing problems. They allow to execute mathematical modeling of the any type horizontal longlines as in resting liquids, so and at presence of the currents.

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THERMIC STRENGTHENING OF MOOVING CORNER PROFILES IN THE STREAM OF ROLLING MACHINE

[1]Ibraev I.K., [2]Bogomolov A.V.

[1]*Innovative University of Eurasia;*
[2]*Pavlodar State University after S. Toraigyrov, Pavlodar, e-mail: ibraevik@yandex.ru*

The given laboratory experiment are Brought on searching for optimum mode termal processing of building renting for kazakhstan producers. In the given work the opportunity of improvement of quality of reinforcing bar from uninterruptedly-casted bars by deformation and thermal hardening is researched. Complex research and development of technology of deformation and thermal hardening of reinforcing bar from uninterruptedly-casted bars.

Introduction. Shaped profiles of rolling (corners, channels, double-T and others) are characterized by irregular distribution of metals in section, which demands regulated selection of heat from different parts of their section in combined deformational and thermic working with rolling heat.

During thermic correcting and deformational and thermic working of corner profiles it is necessary to consider that metal volume per unit top, therefore it is necessary to supply increased heat selection from the cornet top for equal cooling. In this connection the water quantity given to the top must be more over 15–20% than on the leg [1].

For the providing with equal structural and phase transformation in section of the profile the water outlay correlation per unit cornet surface from above and below for the legs must be 1:1, for the top 1: (1,2–1,4). The researchings show that in the process of interupted heat strengthening hogging happens to the side of more intensive cooling. In the result of this the maintenance in the process DTU of given water outlay correlation from above and below for the top and it will provide equal cooling and prevent hogging [2].

Problem statement. According to these conditions the universal installation of intensive and regulated cooling was used for the thermic correcting and DTU of equal corner profiles, which allowed, from the first side, to prevent large thermic and phasal voltage calling hogging and from the second side, to intensity cooling process, which is important for DTU low-carbon steel (Art. 3, art. 5) with high sense of critical heat strengthening speed [1, 2].

The installation of rapid and regulated cooling includes two important blocks: the block of selected cooling of different elements of corner profile water stream and the block of deep cooling in vortical water stream.

Owing to good steam conditions and uninterrupted blows of steams on the metal surface film boiling stage by stream cooling is practicaly absent, that is conform to the cooling increasing.

Results. Moreover at the result of rich inflow to the cooling surface and short – term contact with it water has no time to overheat and its cooling ability does not change. Stream cooling dignity, which is realized in the installation of rapid cooling, is an opportunity of intensive cooling changing in wide limits due to the changing of quantity and speed of water stream from the nozzle, and also cooling zone width by means of nozzle turning in collectors during tuning on definite profile size.

High cooling effectiveness in the second knot – in the rapid water stream on big stages of vortical water stream – may be explained by intensive diversions and team condensation, and also uninterrupted renewal incoming to the reaction water volume on the whole surface of cooling corner part, which is not possible to reach on the other ways of cooling.

For the installation of the technological factors on the machanical means of corner profiles from the art. 3 kp and art. 3 sp. the deformational and thermic working was realized by different conditions. Temperature of rolling rinks was changed, and also duration of a pause between the end rolling rinks and the beginning of intensive cooling. Duration of intensive cooling and pressure of water in the chamber of intensive cooling constantly supported. Keeping Si in the steel was estimated on its mechanical properties. Technological conditions of processing and measured on standard methods mechanical properties of the strengthened structures from steel art. 3 kp and art. 3 sp. are presented in the Table 1–2.

Table 1

Mechanical properties of steel art. 3kp after rolling and intensive cooling during 2 seconds under pressure 0,6 MPa

$t_{k.p}$, °	Δτ	σ_B	σ_T	σ_5, %
		N/mm^2	N/mm^2	
900	≤ 1	390	280	24
1000	≤ 1	370	250	25
1070	≤ 1	365	235	25
940	5	370	260	25
1000	5	355	245	26
1070	5	350	230	25
940	10	365	240	25
1000	10	350	235	26
1070	10	345	225	26

Commentary – st. 3kp (%: – 0,19; Mn – 0,56; Cr – 0,23; Si – 0,04; P < 0,04; S < 0,04).

The given tables show, that important technology factors DTU of lowcarbonic steels in which strengthening processes during and upon termination of hot deformation proceed with the big speed, is *t*, *r*, and r, directly influencing temperature and final mechanical properties of a strengthened product.

The temperature of the rolling end has special value, which for the investigated angular structures makes 880–900°C. Coolings from such

temperatures can pass processes static cell formation and recrystallization, that changes structure in comparison with that, which was at the moment of the end of rolling.

Table 2

Mechanical properties of steel art. 3sp after rolling and intensive cooling during 2 seconds under pressure 0,6 MPa

$t_{k.p}$, °	Δτ	σ_B	σ_T	σ_5, %
		N/mm²	N/mm²	
900	≤ 1	580	400	14
975	≤ 1	525	380	19
1070	≤ 1	485	370	21
900	5	560	385	15
975	5	515	375	20
1070	5	485	345	21
900	10	515	375	16
975	10	480	340	19
1070	10	460	325	20

Commentary – st. 3kp (%: – 0,19; Mn – 0,56; Cr – 0,23; Si – 0,04; P < 0,04; S < 0,04).

Therefore among parameters on which the structure formed during hot rolling is estimated, for results of deformational and thermal hardening its thermal stability is important. As it was already marked, it is connected with the structure and properties of martensite, formed at deformational and thermic hardening, in many respects inherit subgrain structure and dislocational textures of initial heat formed austenite. In this connection the preservation of optimum structure, formed during and upon termination of hot deformation, has important and in some cases defining value [3].

The results of industrial experiments on influence establishment of the temperature of the end of rolling t, pauses between the end of rolling and the beginning of intensive cooling r, at constant duration of intensive cooling r on mechanical properties of equal corner 50×50×50 from the steel %: C – 0,21, Mn – 0,62, Si – 0,27, S < 0,03, P < 0,04, Cr – 0,26 are given in the Table 3.

Table 3

Influence of technological parameters on mechanical properties of the equal corner from the steel

$t_{k.p}$, °	900	975	1070	Parametres of cooling
σ_B, MPa	580	523,0	485	Δτ = 0,2 s
σ_T, MPa	397	380,0	371	τ = 2 s
σ_5, %	14,0	19,0	21,0	P = 0,6 MPa
σ_B, MPa	559	515,0	483	Δτ = 0,2 s
σ_T, MPa	383	376,0	347	τ = 2 s
σ_5, %	14,0	20,5	21,0	P = 0,55–0,6 MPa
σ_B, MPa	513	482,0	461	Δτ = 6 s
σ_T, MPa	375	339,0	288	τ = 2 s
σ_5, %	16	19,0	19,0	P = 0,5–0,6 MPa

Conclusions. From experimental data follows, that decrease in the end of rolling with 1070 up to 900 °C leads to growth of strong properties though at pauses 3 s and 6 s growth of strengthening properties weakens in a greater degree, than more pause (6 s). Mechanical properties of carbonaceous steel St. 3 sp by deformational and thermic hardening can be raised up to a level of mechanical properties of low-alloyed steels 12G2S, 09G2S by the standard 27772-88 rolling for thew building steel

constructions. It gives the opportunity to replace low-alloyed steel 12G2S, 09G2S by deformational and thermic hardening of carbonaceous steel with the economy of alloying elements. Besides such replacement allows to improve technology of hot rolling as a rolling of firmer and less plastic alloyed steel, it is replaced soft rolling with more plastic low-carbon steel. The experiments show, that, despite of a heat of the end of rolling, the effect of high-temperature machining expressed in additional increase of durability at satisfactory of plasticity in comparison with properties, received at usual training from oven heating, comes to light absolutely definitely.

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READING WITH COMPUTER INNOVATIVE TECHNOLOGIES AND E-BOOKS: COURSE AND INSTRUCTIONS

[1]Kutebayev T.Z., [1]Akhmetova G.M.,
[2]Kintonova A.Z.

[1]Astana Medical University, Astana,
e-mail: dzk_talgat@mail.ru, gakhmetova@yahoo.com;
[2]Eurasian National University
named after L.N. Gumilyov, e-mail: aliya_kint@mail.ru

The system of reading learning with the help of computer technologies, e-books, multimedia and interactive tools (Professional English in Medicine, Interactive CD + Workbook) was tested on the basis of the Astana Medical University, Astana city, Kazakhstan [8, 9]. Reading learning was performed on a specially given part of the lesson and took 30–40 minutes. As a result of course with the help of a computer the time of students' reading of the text is decreased, they rarely ask the teacher, and the cases of recurrent asking for assistance are decreased significantly. Students significantly less ask for a help, encountering the word which meaning can be understood independently and they definitely determine the type of difficulty that they have to overcome. Test results were more higher. Thus, we can assume that the given system of training is effective and we recommend it to use in Universities with the necessary equipment.

Computer-innovative technologies, e-Books, multimedia and interactive tools are highly being introduced into the process of foreign languages learning in universities. [1, 10]. We investigated such technical and methodological possibilities of the computer as ability of modeling conditions of communicative activity, the bulk increase of language training in the process of mastering the lexical and grammatical skills, individualization and differentiation of learning, principle implementation of the feedback, objective and complete control of skills; unification possibility of the educational process in different educational institutions, stimulating teachers to use various innovative techniques.

Our exercises from e-Book (Professional English in Medicine, Interactive CD + Workbook) provide visual, detailed orientation, and really quite effective solve tasks – according to the extra motivation students memorize given material more deeply, and use it better during the speech activity as shown on the Fig. 1, 2. [4], [6].

Therefore, we consider that the use of unique opportunities of the computer in the teaching field of reading and writing on foreign language is an important task now. The main task of learning to read in foreign language – is to teach students to read the simple original text and to overcome difficulties.

The use of a computer is necessary for more effective formation of reading ability in the process of teaching reading. The computer can simulate, motivate, optimize self-education, and provide the transfer of linguistic material to the other types of speech activity.

A computer is a supplementary device which solves only certain tasks. Using a computer in training presumes wide practice in reading of traditional printed texts. The computer at the same time will perform the following functions: to be a controlling device, determining the correct understanding; to be learning device, regulating the degree of student's self-sufficiency in the process of text understanding; to provide individualization of text understanding, its stages; to give the opportunity to perform a differentiated approach in the selection of texts and types of exercises for each student; to serve as a means of forming of self-control skills in the process of reading; to be a trainer-simulator, allowing you to work out quickly a particular speech action, necessary for the success of the activities in general; to be a source of extra motivation [2, 3].

Thus, the computer can give the opportunity to manage pliantly with the reading process of the group of students. Using a computer can be effective in the training of skills variety in reading: to teach correctly intone of the text, to help mastering necessary skills of reading technics, to expand the perception field during reading, to increase the individual rate of students' reading, to form the ability how to use dictionary and reference books, to teach students to overcome a variety of language difficulties themselves, to divide the received information from the text into the primary and secondary, etc.