

## THE SPECIFIC FORCE ÎN CANOE SPRINT

Gheorghe BURLACU

*Faculty of Physical Education and Sport - Spiru Haret University  
Berceni Street, nr. 24, Sector 4, Bucharest*

**Abstract:** Force specific he holds as part as disciplines sportsman based in main on the conditional capacities Strength and Endurance a primordial roles in what looks the procurance of the performances sportsmans, between this level and the times achieve (in the case kaiac) existing a relation of direct proportional interdependence. Therefore, this the factor of capacity of performance is it necessary the of a charterage high attentions folowing certainly the principles and the norms of the theory and method of the practice of the sportsman, what fact avouches the of a procurance results of exception.

**Keywords:** *Specific force, performance sportsman, qualities motrics, strok.*

### INTRODUCTION

Being in the group sports performance, Canoe Sprint is based on the maximum capacity development conditional Strength and Resistance/ Endurance and metabolic mechanisms. [3]

Develop motor skills involved in supporting the effort to Canoe Sprint to be seen always in the process of training as a complex process aimed at obtaining uniform performance and sports moments of its maximum event or athletic shape. Unilateral development of a single physical qualities is impossible. [1]

### ISSUES ADDRESSED

This the process has right the objective aim, of a creation capacities of able efforts to assure growthes continuously the average speed on the duration of the race, concomitantly with a growth continues a requirements of the effort and of this compatibility in report with the specific proofs in the proces of practice. [4] [5]

The complex efficiency qualities motrice of base (force and resistance) and the different role gambled of force temporally the race am the exprimates through the of a procurance performances notabile.

During the race, just after the start, must reach high values of:

- The strength maxims;
- The strength in regime of speed;
- Resistance in regime of speed, and in the second part of the race, a high values of the tandem resistance – strength, just to the last meters before the finish line (100-50 m), waves the requirements of the start is repeated, only that in a inverse manner. [6]

In the contest, the "sportsman-boat" sistem must defeat the forces of resistance significant due: friction in water and air to paddle and the form it takes boat in the water and also moments of inertia caused by variations in speed total force strength increasing to a value approximately equal to the square of its speed in a linear increase.

Therefore, the athlete must have highly developed specific motor skills to achieve and maintain a high average speed. The potential strength of sportsman in order to defeated the forces of resistance arises from the cyclic succession motions of row and pass the paddle through water. Therefore athletes performed pulses larger strength than is necessary to achieve a particular average speed.

In the case of a frequencies opime, breed the speed is possible, if only he breeds the propulsion on each stroke. At that rate, is enforced as premise the potential growth of concomitant force with an optimum structure of the stroke.

The decisive elements, in the covering of the distances the proofs of canoe sprint, represents it the necessary number of strokes reportedly to the strength motrics exercised on the axle of the paddle, what involves that a high level of a resistance-force for all athletes. [6]

Of reflection that the big frequencies of strok and the duration pass paddle through water (0, 4 - 0, 6 sec), he enforces the requirement as the the resistance to is associate, on aside, quality motrice strength, and but then, the resultant demonstrate this, respectively can in raport with speed.

With how much the force exprimate/developed of athleete in the time exertion of the motric act of row is elder, with as much the efficaciousness fallad across this in the effectuation of the distances of contests breeds proportionally, facts materialized in the of a procurance output singularly times of exception, unbelievable abaft with 4-5 editions of the O.G. Is the case of the proof of K1 500 m male which, to the edition of the O.G. from Montreal were, gained of our compariot Vasile Dâba with for 1'46"41, while to O.G. from Bejing - 2008, one were gained of the australian sportsman Wallace Ken, with for 1'37"25, this the fact demonstrate, without equivocal, the weight breded the specific strength, sustaine closely of an equivalent resistance, what fact

this license to develop a frequency of row (strok) extremely high and in the same time. [2]

In what he looks the classification of the proofs of contests in canoe sprint, in the limits of the task of average resistance with tendency toward the fleeting resistance, the training theory says that the level of resistance average is caused, in main, by the level of resistance and resistance-speed. This requires, first, overcoming the resistance of relatively large forces, constantly recurring throughout distances. [3]

In canoe sprint the typical preparation of strength is, pursuant to the character of cyclicity and repeatability the same sequences motional, as a matter of fact a preparation of resistance.

This is explained through the fact that, in the procurement really the performance, the act directly the force maxims is imperious necessary. In this situation we do so with a specific training canoe sprint competition strength. Therefore the specific practice of strength comprises all the task of conducive to preparation the potential growth of strength in the of a alone contents loop, using resistances the big his maul the little maul in varied conditions of practices.

The specific exercises, binded structure and the tandem strength/time, be due to corresponds largely the execution of the motions of contests. Thence, is enforced as the proper specific exercises in the practice of resistance to is selected in such kind that the muscular active groups from the spatial temporal structures and dynamic motion to don't differs not at all or just little against tensional of contest. Temporally, in the contest, exists some successions sequences different force in the frame of due stroke especially specificity of the proof. [1] [7]

The possibility of changing the resistance forces in training on water (outdoor training) are different in efficiency to achieve competitive performance.

Thence in the process of practice its used in this sense a middle series and methods of practices with increasing weight varied in capacity of effort. Thus, its used methods of practices for the development tandem resistance/strength in boat with supplementary resistivity consisting in:

- Overbalance in boat;
- The enlargement of the paddle;
- The enlargement of the length of the paddle;
- Row afloat little deep ("heavy-water");
- pull hydraulic brake;
- Row in amonte (upstream)
- Rowing alternating partner.

The same method can be used and with little resistance using:

- The short maul paddle;
- Paddle attenuate;

- Practice down-stream (in the current sense);
- Practice in the wave the trace ("place") other boats. [6]

With regard to the two different types of resistance it is necessary to know the degree of water loading, practically used without modifying means.

This presupposes that a practices of big afloat speed, on below threshold distances of contests (practices of resistance), is based also on the proper cancellation law, of the task to the opportune moment.

In this way it is possible to achieve higher speeds and partly to a higher level of application of strength (or any higher stroke frequency) than the competition. Training that aims the development of resistance base (at lower speeds than the speed competition and longer) may set different targets for developing optimal conditions to obtain performance at levels lower or higher application of strength/ stroke .

In the performance training exists the general valid principle and unanimous accepts fit whom in the proofs of resistance don't is followed the extension on large scale of the volume of the practice, the authentic what reserve underlie the growth of the performance obtain through the improvement quality of the lessons of these practices qualitative modifications can have as the output an elder task in practice through the continuation of usual volumes of practices. In this situation exists the possibility installation of the syndrome of which overachievement must avoided through the of a identification a new middles and methods of preparation from qualitative viewpoint. [8]

This improve the quality of the practice can be realise on the strength of the methods of the practice of specific force expose previous, remarked the importance breded this type of preparation. This realization the desideratum is based on the level qualities motrics involved in the support of the effort in canoe sprint and on these weight in the structure of the race. [1].

Based on indices of strength established for tests in the laboratories of the National Institute of Sports Medicine, by team members representative of Romania, representatives of the Romanian Kayak Canoe Federation, with specialists of the National Research Institute for Sport, could identify significant interdependence between those qualities, that have led to the conclusion that the specific strength athletes in the 2012-2016 Olympic cycle, increased by 17% from the previous period, allowing them and increase the speed by 3.8%.

Based on these considerations it can be concluded that the presence of specific strength qualities can be demonstrated / measured by modern means of measuring, The only problem consisting in the use of

training methods, means and appropriate techniques to develop this quality athletes. These efficiency methods can be measured through the transfer of the strength for the boat propulsion and through the speed of displace the boat.

The strength qualities, specific in canoe sprint, complaining of beatings symmetric application of both sides in order to ensure minimal resistance. Therefore musculature requires that differences be reduced and not be provoked, in preparation ambidextrous imposing the use of force in achieving exercises.

If is put the accent on the practice of specific strength in favor of other methods of practices, must directed to a possible of a appearance negative effects about development basic qualities for the resistances performance procurance. It is well known that a large muscle mass in cross-section have a negative effect on the performance of the long-term strength tests. In this respect it is necessary to address the principle of specificity, targeting athletes specializing in certain competition tests, preparation getting a custom character based on specific effort put in each proof. [9]

### PROPOSALS

When training aimed at developing specific strengths is important that it be planned on a longer process of training, this because, if it fails to develop specific strengths in preparation, it is very difficult to compensate for the gap in competitive period.

The specific strength in canoe sprint can be study through the prism what characteristic visas:

### REFERENCES

- [1.] Bota, C. (2000) – Ergofiziologie. Publisher Globus, Bucharest
- [2.] Burlacu, Gh. (2007) – Training in Canoe Spring and competition modeling effort. Publisher Moroşan Bucharest
- [3.] Dragnea, A., S. Teodorescu (2002) - Theory of Sport. Publisher FEST, Bucharest
- [4.] Manno, R. (1996) - Fundamentals of sports training. Translation CCPS, Bucharest
- [5.] Nicu, A. (2002) - Sports training theory and methods. Publisher Foundation "România de Măine", Bucharest

- The distance of contest;
- The type of boat (K1, K2, K4, C1, C2, C4;
- The specific incident to appearances sex;
- The type of course (canoe-kaiac) and as part as these groups, the variants of crews;
- Specific muscles involved in the effort;
- Effort on every shot or blow cycles.

To control the motric qualities that grow with increasing speed boat, should be permanently compare the training parameters (in our case the strength) with performance indices: during achieved, the place obtained in the final classification, etc.

The specific strength transformation in speed can take place either at the level of propulsion (per shot) or frequency (strokes / minute) or both of them, depending on the performance achieved by obtaining the optimal propulsion and stroke.

### CONCLUSIONS

According to those presented, it can be concluded that the development aims at influencing specific strength structure for achieving optimal individual performance.

Thus the Canoe Sprint there are certain limits to structure propulsion and times set during the race, such as those related to the type of morpho-functional sportsman, aiming anthropometric characteristics, morphological, and not least physiological, type of activity nerve, excitability and reactivity of the Central Nervous System - SNC (reaction latency driving), neuromuscular coordination, body balance, sensitivity analyzers, etc.

- [6]. Torro, A. (1986) – Canoe Sprint, an Olympic sport, California
- [7]. Weineck, J.(1992) – Biologie du sport. Edit. Vigot, Paris
- [8]. \*\*\* - Manuale dell' istruttore (1989) Roma, FEDERAZIONE ITALIANA; CANOA KAYAK, Canoa
- [9]. \*\*\* - Preparation of strength in Canoe Sprint - a multidimensional concept (1992) - Bucharest, MTS - C.C.P.S.